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Thresholds is published biannually in spring and fall by the Department of Architecture at the Massachusetts Institute of Technology

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Thresholds is funded primarily by the Department of Architecture at MIT. Alumni support also helps defray publication costs. Individuals donating $ 100 or more will be recognized in the journal as Patrons.

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Printing
Copyright Summer 2005
Massachusetts Institute of Technology
ISSN: 1091-711X

Design by schultzundschultz.com
Printed by Kirkwood Printing, Wilmington, MA.
Text set in Klavika; digitally published using Adobe InDesign.

I would like to thank for their help and support. Azra Akšamija, Lucia Allais, Kathy Wheeler Borum, Jennifer Ferng, Brendan Karch, Pamela Karimi, Lauren Kroiz, Ijlal Muzaffar, Andrei Pop, David Rhoese, Tijana Vujosevic, Stefan Wagner, Kirsten Weiss, and especially Andreas and Renate Schultz, Jeanette Pacher, Talia Dorsey and Tim Campos; special thanks also go to Mark Jarzombek and Anne Deveau.

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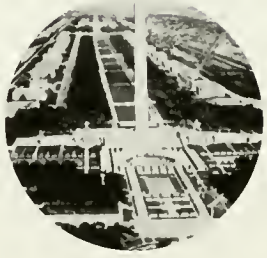
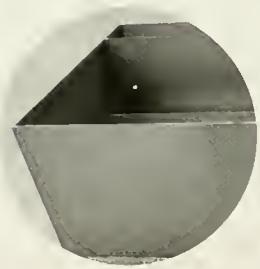
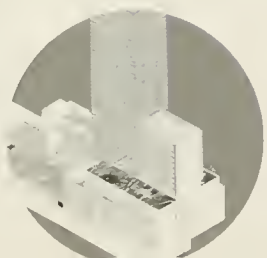






Mechtild Widrich

Wholly Partial. An Introduction

"You're in a bar, having a drink, and someone beside you starts a conversation. Someone you might fancy the look of. All very pleasant, and then you're chatting along, and she or he, we have men as well, mentions this great new streetwear label, or this brilliant little film they've just seen." (William Gibson, *Pattern Recognition*)

William Gibson's thriller *Pattern Recognition* involves the reader in the struggle for individuality and authentic modes of expression in today's "post-geographic" society. Throughout the protagonist's search for the elusive creator of filmic footage that had appeared on the Internet and had stimulated a fashion driven, esoteric yet globally active community, we do not know if the footage emerged from an artistic subculture or a clever PR department. Gibson confronts us with the uncomfortable possibility that everything we seemingly long for as individual and non-interchangeable beings is nothing else than the carefully thought-out staging of multi-national businesses, trying to establish us as functioning units within consumer society. Even the most spontaneous liking and the most comfortable encounter with others might be just part of a concerted merchandising activity. Ultimately, Gibson shows a power struggle between the microstructure of individual models of life and the macro-system of a globalized world, which gains energy through its inextricable reciprocal dependency.

Gibson's axis of reference is a concept that has fascinated for many centuries. The thought that the patterns of existence resemble and influence each other from the smallest to the biggest unit can be traced throughout history; it shaped the contours of Platonic philosophy, mysticism, alchemy, aesthetics and the arts. Two main questions reappear in this context: first, which is the influencing and which the influenced component; and second, at which point does the seemingly self-enclosed and monadic system of the microcosm become permeable? That is, where does it interface with the outside? And is this outside antithesis or equation?

The classical thought of embedding the smaller into the bigger element as comforting linkage with a divine and organized macrocosm (kosmos meaning both order and world), is reversed in Gibson's novel.

In its contemporary transmission, the (illusionary) desire to be authentic is threatened by anything that could shape or predetermine the individual from the outside. In the end, Gibson allows for the possibility that, even in the very rational, globalized superstructure, spontaneous emotions do take place. In an almost Romantic conclusion, he returns agency back to individual creation; the emotional ontology generated in ignorance of an outside world and free from calculated response succeeds, not as encapsulated entity, but as micro-utopia, which forces the structure around it to adapt to its pace and mode.

Post-Marxist theories of recent years have operated with a comparable idea of the micro-utopia, fashioning it as an operational method of opposition from within the political system, a postmodern resistance tool that does not aim towards a radical (revolutionary) change. Also in the realm of cultural production, the idea of locating traditional subcultures on the "margins" of society, from where they act against the center, has

been largely supplanted by the concept of "interstices," which function as contemporary microcosms integrated into macro-systems and are thus able to act from within.

Initially it was this contemporary use of the concept of microcosm that shaped my wish to look at it from different points of departure. I am therefore grateful to everyone who took the time to prepare a submission, and helped broaden my view. I hope that the parts of the parts that are being presented here are conceivable, not as wholes, but as valid fragments of the possibilities of the concept.

Faust: *Nun gut, wer bist du denn?*
Mephistopheles: *Ein Teil von jener Kraft,*
Die stets das Böse will und stets das Gute schafft. (...)
Faust: *Du nennst dich einen Teil,*
und stehst doch ganz vor mir?
Mephistopheles: *Bescheidne Wahrheit sprech ich dir.*
Wenn sich der Mensch, die kleine Narrenwelt
Gewöhnlich für ein Ganzes hält -
Ich bin ein Teil des Teils, der anfangs alles war.
Johann Wolfgang von Goethe, Faust I*

The microcosms introduced in this publication contribute to an analogous sense of vertigo – from inversions which reinforce the status quo to dependent fragments that subvert the structure of the entirety.

The dissolution of one individual in the superstructure of knowledge and his reappearance in microscopic doses in the work of others is the topic of Nikki Moore's essay on the French philosopher Jacques Martin. Jacky Bowring hauls out the ambivalences in the idea of mimicry in her psychoanalytical reading of the new roof garden of the Museum of Modern Art in New York. Paolo Soleri elaborates on the micro, the macro and the mega and proposes an utopian understanding of nature, humanity and the cosmos from his viewpoint as architect. The ambitions of the United States to "adjust" Middle Eastern countries after WWII to consumer culture is explored by Pamela Karimi, who introduces us to the socio-historical and political implications of the modernization campaigns in Iranian households. Freedom and constraint play a role in Olga Touloumi's reading of Franz Kafka's short story "Der Bau," in which the impulse to construct a safe and invulnerable surrounding shifts the origin of danger to the inside.

Three projects show how the idea of the microcosm can be made operative in the realm of design: The problem of finding oneself inside an actual closed-off microcosmic system, a spaceship, is the starting-point of Barbara Imhof's and Susmita Mohanty's proposals to alleviate psychological unease during space travels. Azra Akšamija's wearable mosques expand the notion of religious space and explore its formal limits. Marianthi Liapi and Susanne Seitinger present an interactive spatial "workshop," a construction kit that enables children to playfully assemble their own microcosmic surroundings.

Daniel Barber dives into the middle of the current debate in architecture; by reading anti-humanist theory and specifically the concept of the diagram against its post-critical interpretation, he proposes to retain a resistant political project in contemporary architectural practice. Itohan Osayimwese's account of 19th century German Pietist colonies in Africa shows how utopianism and colonialism overlapped and shaped a specific missionary form of settlement. The attempt to construct Washington D.C. as microcosm of the United States is analyzed by Wolfgang Sonne, ultimately leaving us doubtful that architectural language is able to consolidate and transmit messages solely through form. The ongoing negotiation in reclaiming local spaces for temporal individual action, regardless of their predefined architectural or economical setting, is explored in Peter Mörtenböck's analysis of the urban practice of free running or *parkour*. Edward Levine reflects on modernist art's self-referentiality in contrast to postmodernist's contextualization, while Mark Jarzombek bridges the formally sealed 1960s art project and the physically sealed museum universe to demonstrate the fugitivity of aesthetic permanence at the personal and institutional level.

One common motive in the diverse microcosmic strategies pursued here turns on Mephistopheles' own reluctant admission: just as he partakes of that spirit which, desiring evil, does only good, so our micro-worlds, desiring closure, bear within them the potential to radiate onto the greater world. It is this belief in the umbilical cord binding micro to macro that has energized organizations in opposition to the ruthless conduct of economic globalization in recent years. It remains to be seen which impact those microcosmic endeavors will have.

Faust. *Well now, who are you then?*
Mephistopheles: *Part of that Power which would*
The Evil ever do, and ever does the Good (...)
Faust *You call yourself a part, yet whole you're standing there*
Mephistopheles: *A modest truth do I declare*
A man, the micracosmic fool, down in his soul
Is want to think himself a whole,
But I'm part of the Part which at the first was all.

Jacques Martin, 1946.

Nikki Moore

The Man without Work: Jacques Martin

There are many ways to introduce a man. Yet to introduce Jacques Martin as just a man is both incomplete and inaccurate: as, among other things, he is at once a symbol, a schizophrenic, an absence, a mirror and a past friend of Michel Foucault and Louis Althusser. Viewed as a friend, Martin's relationships with Foucault and Althusser began at the École Normale Supérieure in Paris in the 1940s. In this context, Jacques Martin is the little known figure who influenced Foucault and Althusser in their identities, in their choices, in their writing and in their *work*. Viewed strictly from Foucault's work, Martin is an *absence of work*, a critique of Kant's formulation of *work* in the *Critique of Pure Reason*, a symbol of the breakdown between madness and reason in the collapse of metaphysics. As Martin the schizophrenic, Martin is the embodiment of that breakdown: from his inability to produce coherent thought to his inability to distinguish rationality from the mad voices in his head. Sharing these mad voices, Louis Althusser introduces Martin as this symbol, this absence and this schizophrenic in a retelling of his own autobiography, in which he takes on memories of Martin's childhood, his sexuality and his purported illness as his own.[1] Therefore without recourse to proper introduction, in what follows I will nonetheless introduce an important figure in Foucault's critique of Kant's theory of work, an important influence on Louis Althusser's 'road to Marxism' and an absence in the collaboration of three men whose presence attempted to recreate something analogous to that which Martin, in the annihilation of his work and the demolition of himself in suicide, both created and destroyed.

Jacques Martin:

Jacques Martin: to single out his name in print is to give deceptive clarity and singularity to a figure seen only through the lens upon lens of others. Cited in the works of Louis Althusser and silently influencing Foucault's writings on reason and madness, the varying views that create what we know of Martin are a multiplicity of stilted narratives known to posterity only through silent and written dedications in footnotes, in application forms and in story telling of the sort herein. As in the writing of any story, sacrifices are made for what we consider clarity, continuity and readability. While this is a story of Martin, it is also of a story of those sacrifices and those processes of subject making which require decisions, additions and primarily, deletions.

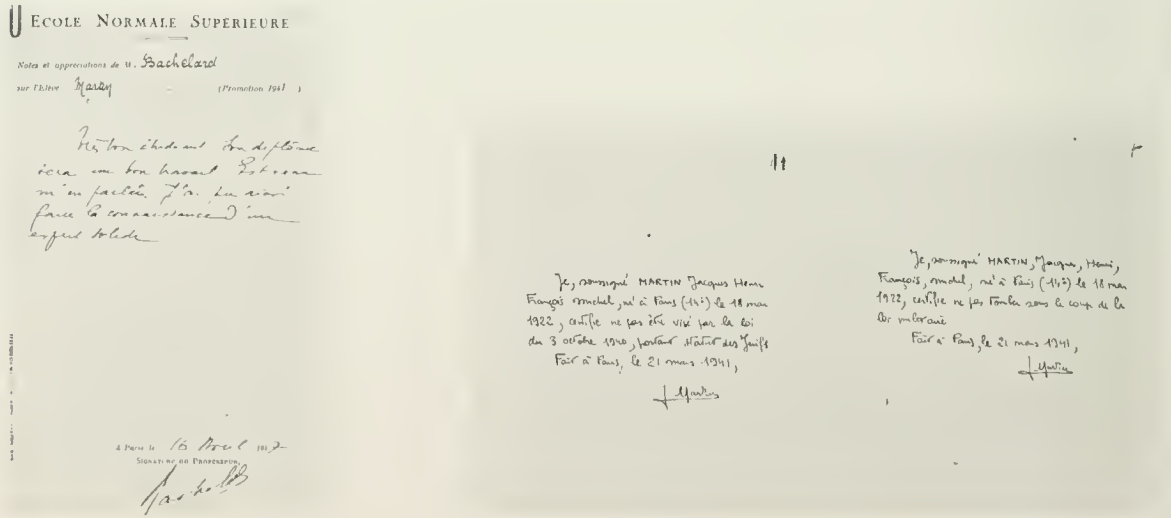
The easiest way to tell this story may be to begin in Jacques Martin's beginnings. His birth, verified by one of the only remaining artifacts of his life, took place on the 18th of May, at 5:30 am, 1922.[2] Christened Jacques Henri Michel François Martin, he was born to Felix Henri and Marguerite Martin in the 14th arrondissement in Paris. As a child of five, Jacques and his younger sister Jacqueline, age 3, were sent to live with their maternal grandparents, the Tonnellots, in Niévre when their mother, Marguerite, was diagnosed with a supposedly terminal case of tuberculosis. At age 14, Jacques returned to his early childhood home at 6 Rue Froidevaux in Paris where the death of his grandfather and the stunning recovery of his mother brought him to the Lycée de Henri-IV, where he entered as the class salutatorian. After taking first place in the French General Exams[3] in 1938, Martin applied for admittance to the École Normale Supérieure.

This above linear story of birth, childhood and Jacques' first step into adulthood is one gloss on Martin. It is the story of a child who grows from boy to manhood, it is the outline for a life that my lines cannot fill. A second beginning of Jacques Martin begins in his time at the École Normale, where he befriended Michel Foucault and Louis Althusser. To this day, J. Martin's first official file at the École Normale includes, among other things in his application for admittance, a testament to the validity of his birth certificate, a handwritten curriculum vitae, reference letters from past teachers in testament to his intellectual aptitudes, two testaments as to Martin's legal status and a letter from *La Commission Médicale*. This set of artifacts outlines the second Martin, contiguous with the first in his ability to excel in school, yet different in his shadows, different in his relationships, different in his implications.

Jacques Martin's École documentation includes a verification of his birth certificate, issued by the Mayor of the XIV arrondissement on March 13th, 1941. His file is filled with reference letters that sing the praises of one surely destined for greatness at the École Normale. In Martin's letters for promotion a past teacher by the name of Monsieur Gusdorf states that he is one of the best qualified candidates for the École's 1941 aggregation by praising Jacques' solid philosophical background and his valor in expressing ideas. Monsieur Piobetta proclaims that, from what he has seen, Martin possesses a distinguished spirit, with an aptitude for discussion and plenty of finesse. Later, among others, a Monsieur Gaston Bachelard states that Martin is a good student, with good diploma work and solid knowledge.

With this fine application, Jacques Martin was admitted to L'École Normale Supérieure, yet the documentation following Martin's admittance takes on darker and darker shadows before it steals away altogether into a void. The first shadows appear in what is missing from Martin's medical record. The paper included in Martin's files decrees that Monsieur Martin, graduated from the Lycée Henri-IV, and under the execution of article 4 (of May 1904), "est *propre oux functions de l'enseignement*,": i.e., Martin was, in 1941, 'ready for the functions of learning.' While Jacques Martin entered the École with the highest marks, by the time Martin and Foucault failed their final thesis exams, Althusser claims that Martin was suffering from advancing schizophrenia.[4] As his speech, writing and thoughts became increasingly incoherent and unproductive in illness, Martin was unable to distinguish rationality from reason; essentially he was unable to produce coherent work of any kind.[5]

In Jacques Martin's second official folder at L'École Normale, two handwritten testaments bring the tensions of World War II into the history of Martin, the adolescent male, the emerging subject. The first of these two statements reads as follows:


ECOLE NORMALE SUPERIEURE

Notes et appreciations de M. Bachelard

sur l'Elève Martin (Promotion 1941)

Je, soussigné MARTIN Jacques Henri François, célibataire, né à Paris (14e) le 18 mai 1922, certifie ne pas être visé par la loi du 3 octobre 1940, portant statut des Juifs.

Fait à Paris, le 21 mars 1941,

Je, soussigné MARTIN, Jacques, Henri, François, célibataire, né à Paris (14e) le 18 mai 1922, certifie ne pas tomber sous le coup de la loi portant statut des Juifs.

Fait à Paris, le 21 mars 1941,

I, the undersigned, Martin Jacques Henri François Michel, born in Paris on May 18, 1922, certify that I am not under the law of October 3rd, 1940, regarding the statute of the Jews. Paris, March 21, 1941. J. Martin.[6]

Nearly identical to the abovementioned handwritten testament by Martin, this graph paper statement mirrors the official rhetoric required for entrance into the École: 'I, the undersigned, born in location X on the Xth day of the Xth month, 192X, certify that...' Martin finished this formula with various statements, such as: 'my father is a pharmacist,' 'I have the approval of the Secretary for Public Jurisdiction for my application,' and, as in the above quote: 'I am not under the law of October 3rd, 1940, regarding the statute of the Jews.' The rhetoric comes to bear in another of Martin's testimonies:

I, the undersigned, Martin Jacques Henri François Michel, born in Paris on May 18, 1922, certify that I am not under the arm of military law. Paris, March 21, 1941. J. Martin.[7]

'I, the undersigned... certify that I do not fall under the arm of military law,' signed by Jacques Martin in 1941. In 1941 the German occupation of France had been in effect for over a year. Though Poland was invaded by Hitler's Germany in 1939, the 1940 invasion of Belgium came as a surprise to the French and the British. As both of the latter countries rushed north to protect their neighbors, the German army made its way south, through northern France to arrive in Paris for a coup and occupation. Moving the head of government to Vichy released little pressure from the city of Paris. In 1941, Jacques Martin could sign the release stating he was not part of the military, but within the span of two short years, all of this would change.

With one remaining file, written by Emile Bréhier on April 17th, 1943, the archives of Martin's time at the École come to a close. Again, Bréhier, like others before him, writes that Martin's previous years' work is "good, with a sharp and solid spirit". The future looks promising... yet Martin's files end here. There are no hints of a graduation, no signs of what was to become of Martin post-ENS. It seems then, that we might end here, where we began with this Jacques Martin; full of intellectual promise, genius and compelling communicative abilities. Yet, by way of Moulier Boutang's work, another story and another Jacques Martin comes into being. It is one, perhaps, that takes on more shadows than Martin's ENS files could hold.

In June of 1943, two months after the last noted reference letter as to Martin's work at the ENS, the German occupation of France finally swept Martin into the militant, anti-Semitic and unsteady public domain of World War II Paris. At this time Jacques Henri Michel François Martin and 249,999 other Frenchmen were called up for civilian service in the ranks of the Service du Travail Obligatoire (STO). The STO began as a way to fuel the German war machine and the German agricultural and industrial economies. After the 1942 invasion of Belgium and France, workers from each conquered nation were required, by the Nazi regime and its Vichy counterparts, to fill labor shortages in exchange for their freedom from Bolshevism. Fritz Saukel, head of the STO under the Germans, first forced all prisoners of war to work in German factories and industries. Next, with the help of propaganda offering better wages and decent food, the French could choose to support their families by means of German employment. Then, 'exchanges' were promised: for every three French workers employed in Germany, one prisoner of war would be released. Yet, by 1943, the exchange figures were disappointing on both sides. By February of that same year, all unemployed French men between the ages of 16 and 60, along with childless women between the ages of 18 and 35, could be exported by train for work in Germany. Two weeks later, as pressure for STO recruitment grew, Saukel demanded that all unemployed men between the ages of 20 and 22 would be sent for service in Germany. This age group included and targeted France's best, brightest and most energetic as they entered their respective Universities and Écoles. The 20-22 call enraged the French, and as resistance to STO grew, schemes were devised whereby 'unemployed' students could falsify their French employment status and escape STO deportation. According to work done by Yann Moulier Boutang, it was particularly easy for *normaliens*, (students at the École Normale), to evade the STO in this way. Sympathetic industries and businesses run by past graduates or admirers of the École Normale offered *normaliens* false employment to escape the draft: Jacques Martin was offered at least one such escape route. Yet, in June of 1943, Martin left France for Francfort sur le Main, where he stayed in STO service until April 12, 1945.

Beginning in 1941, the year Martin applied to the École, France's escaped and former leader, Charles de Gaulle, began making speeches from London calling up the French to resistance by way of British military service. In France

as in the French colonies, French loyalty was strained as de Gaulle formed the Free French Forces and lead them in a failed march against the Vichy government. Still in this era of tension, Martin's decision to work in Francfort sur le Main is troubling. Louis Althusser, in his autobiography, speaks for Martin on the issue of his STO service: Althusser insists that it is Martin's Kantian ethic, his inability to evade duty, that brought him to Germany.[8] Yet once he was there, Althusser and Moulier Boutang claim, the intellectual prowess that echoed through Martin's ENS files took its first steps into a darkness that he would ultimately claim in suicide. The date when schizophrenia first took hold of Martin is unknown, but Althusser claims that his abilities began to diminish in Germany.[9]

When Martin returned to the ENS from Francfort sur le Main, his situation did not improve: *he had trouble getting rid of the feeling that he had missed an opportunity.*[10] In a climate of resistance, STOs were not well received and Martin felt disenfranchised. Apart from social friction, Martin deeply questioned his own relationship to German philosophy and culture.

> *Yet in Frankfurt, at the heart of German philosophy is where he found the resources for his mutation. He began to read a lot of Hegel, and in 1945, he entered into Marx with both feet. ...he left* [for Germany and the STO] *...as a Kantian very concerned with aesthetics and at the liberation he found him*[self] *Marxist and Hegelian.*[11]

What we know of Jacques' direct relationship with Marxism, and by extension, the Parti Communiste Français (PCF) is that he was never an official member. He attended meetings, and along with Althusser, is remembered for a dedication that often superseded that of his card-carrying comrades. What remains of Martin's views on Marxism in the 1950's are ideas passed through to the mind and works of Louis Althusser.[12] Personally and philosophically Althusser absorbed Martin, reading Marx, Hegel and Kant with Martin's help and translations. When Martin was still in the early struggles with schizophrenia, Althusser found an apartment for Martin at 6 Rue d'Ulm, next to his own at 7. But by 1948, Martin's abilities to communicate and to write were fading fast. Instead of leading Althusser into the depths of Marx, Kant and Hegel, Althusser now became the coach for his teacher. When, in that same year, Martin failed his final dissertation, his own situation became truly unstable. He lived in the pockets of his friends, borrowing money and failing to show up for carefully and specially arranged job interviews.[13]

After turning down all offers for employment, in Martin's defense Althusser said of Jacques that to subject himself to the will and choosing of an other, a larger group, or organization would bring a shadow Martin could not shake.[14] Yet not all of Martin's actions were stilted: sometime after March 12th, 1950, Jacques joined millions of others in signing 'The Call of Stockholm.'[15] 'The Call' was a petition, drafted by communist Frédéric Joliot-Curie, stating opposition to the use and production of atomic bombs. It reads as follows:

> *We require the absolute prohibition of the atomic weapons, arms of terror and the massive extermination of populations. We require the establishment of a rigorous international control to ensure the application of this measurement of prohibition. We consider that the first government who would use, counter any country, the atomic weapon, would be committing a crime against humanity and should be treated like a war criminal. We call all the men of goodwill in the world to sign this call.*[16]

Millions of people world-wide signed the Stockholm petition, and by doing so, they participated in the mounting Cold War tensions between the United States and the Soviet Union. According to the terms of the petition, the United States Military should be tried as war criminals for the bombings of Nagasaki and Hiroshima and all of its efforts toward stockpiling an atomic arsenal would be called to a halt, putting the Soviet Union in a clear atomic advantage. When the author of 'The Call of Stockholm' was held at Ellis Island and barred from entering the US, the tension surrounding the Stockholm document hit its peak. All that remains of Martin's reflections on this situation is knowledge of a signature of agreement with Joliot's petition.

In the height of these tensions, in 1951, Martin's mother Marguerite died from lung and cardiac failures. Martin inherited a large sum of money from her, but also re-inherited lasting problems with his father, Henri. Authoritarian and dominating, among other things, Henri never forgave Martin for choosing philosophy rather than his own unfulfilled medical aspirations. When Henri died in 1969, five years after Jacques, neither father nor son had resolved their conflicts with one another, and the disconnect forced Martin to fend for

himself without parental support, even through his struggle with schizophrenia.

So, without work, without income, and without stable support, Martin dreamed of days in Italy and a trip to the United States that would never result. In the meantime, Martin's only documented actions after signing 'The Call' are his French translations of two German texts: Ernst Wiechert's *Misso Sine Nomine* from 1950-1951, and Hermann Hesse's *Le Jeu des Perles de Verre* in 1955. Along with his translation of Hegel's *L'Esprit du Christionisme et son Destin*, these works are all that remains of Martin's academic textuality. And, apart from choosing their object, Martin's translations reveal little about his own ideas and inclinations.

Of those ideas and inclinations, once again we are left to pick up the fragments from Althusser and the writings of Foucault. In his autobiography, Althusser remembers a day when Jacques Martin announced that he had destroyed all of his work. What and how much Martin destroyed is unclear. What is clear is that upon destroying all of his own productions, Martin became a true *homme sons oeuvre* – a term both Jacques and Michel Foucault had attributed to Martin and his condition.[17]

His condition: nothing in Martin's academic files hint toward Martin's condition outside of his past scholastic record. So it is up to this point, as I have attempted to put together a timeline of sorts for Jacques Martin's life that my work fails. Gaping holes, ignored tangents, all that would complicate the linear nature of my narrative has been carefully streamlined into the above story of one man and one part of this man's life. I have, in effect, falsified all that this article contains, as no life is as unilinear as the story I have told. Particularly not the life of Jacques Martin, as he most likely considered himself no *one* in particular.

Adolf Hitler in Paris, June 23, 1940.

General Charles de Gaulle speaks to the people of Cherbourg from the balcony of the City Hall during his visit to the French port city on August 20, 1944

endnotes

1 For further discussion on the ideas introduced in this introduction see Nikki Moore's S.M.Arch.S thesis. *Between Work Michel Foucault, Louis Althusser and Jacques Martin*, Massachusetts Institute of Technology, (Cambridge, Massachusetts, 2005).

2 The documentation I found in J. Martin's application to L'Ecole Normale Superieure indicates his name as written here, "Jacques Henri Michel François Martin," as does a copy of his birth certificate found therein. In his autobiography of Louis Althusser, Yann Moulier Boutang writes his name as "Henri, Jacques, Michel Martin." See Yann Moulier Boutang, *Louis Althusser: Une Biographie* (Paris: Bernard Grasset, 1992), footnote 1, 453

3 See Moulier Boutang, 454

4 Martin's language skills exceeded that of his colleagues as he entered the École Normale in 1941. He was exempted, by examination, from the living language courses required of his compatriots, and his grasp of German earned him several contracts for translation. See Martin's École Normale files and Moulier Boutang's chapter titled "Le Jeu des Perles de Verre".

5 In the chapter titled "Le Jeu des Perles de Verre," Moulier Boutang describes the only picture of Martin's schizophrenia which exists on paper: his obituary, written by Louis Althusser. Along with a dedication written by Althusser in *For Marx* which alludes to Martin as 'the friend... in the most terrible ordeal', this obituary provides a unique sketch of a man suffering from what we would now call mental illness. Just who that man is, be it Jacques Martin or Louis Althusser, is elusive. The obituary reads as follows

"He decided it was enough when he knew that he was going to lose his reason of living: his intelligence, the ultimate edge of this intelligence was, in the final count, a feature drawn from hope, this act of clearness: to precede the night Perhaps he had known it was coming? Perhaps it was a recourse. We at least, cannot survive to him without the tearing at this thought But which recourse? He knew for a long time, knowing its evil, that in last authority, he alone could decide to live

He fought during twenty years, cold, calm, complete, precise, never weakening nor yielding, without even one word of complaint: worthy He chose death deliberately so as not to live another death in the night of an anguish without term.

Others before him died, having lucidly risked the limits, in science or the action, and died from the effects of their freedom. He was unable to choose these limits: life had enclosed him forever there, in this dreadful captivity, he made an extraordinary experiment of the intelligence, its only freedom.

Twenty years before us he saw what we start to foresee: in twenty years we will be still at his school. The thought which he left, in two sixteen year old writings, and in all his acts and matters until the end, had an edge of his death: a blade." Moulier Boutang, 451

6 From Jacques Martin's file in the École Normale student archives.

7 Ibid.

8 Moulier Boutang, 455.

9 Ibid.

10 Translation of Moulier Boutang, 456.

11 Translation of Moulier Boutang, 456, italics, (...) and [], mine.

12 Althusser's Marxism can also be traced back to Martin's translations of Kant, Hegel and then Marx Intrigued and persuaded by Althusser's future wife Helene and Martin's communist commitments, Althusser abandoned his fervent catholic convictions and joined the French Communist Party, known as the PCF. In the years directly after Martin's death, Althusser published his first breakthrough works on Marx: *Reading Capital* and *For Marx* In these works, Althusser developed a theory of anti-humanism in Marx's later writings, a move that announced a break between the early and later Marx, and catapulted Althusser to a controversial limelight within the PCF.

13 Moulier Boutang, 456.

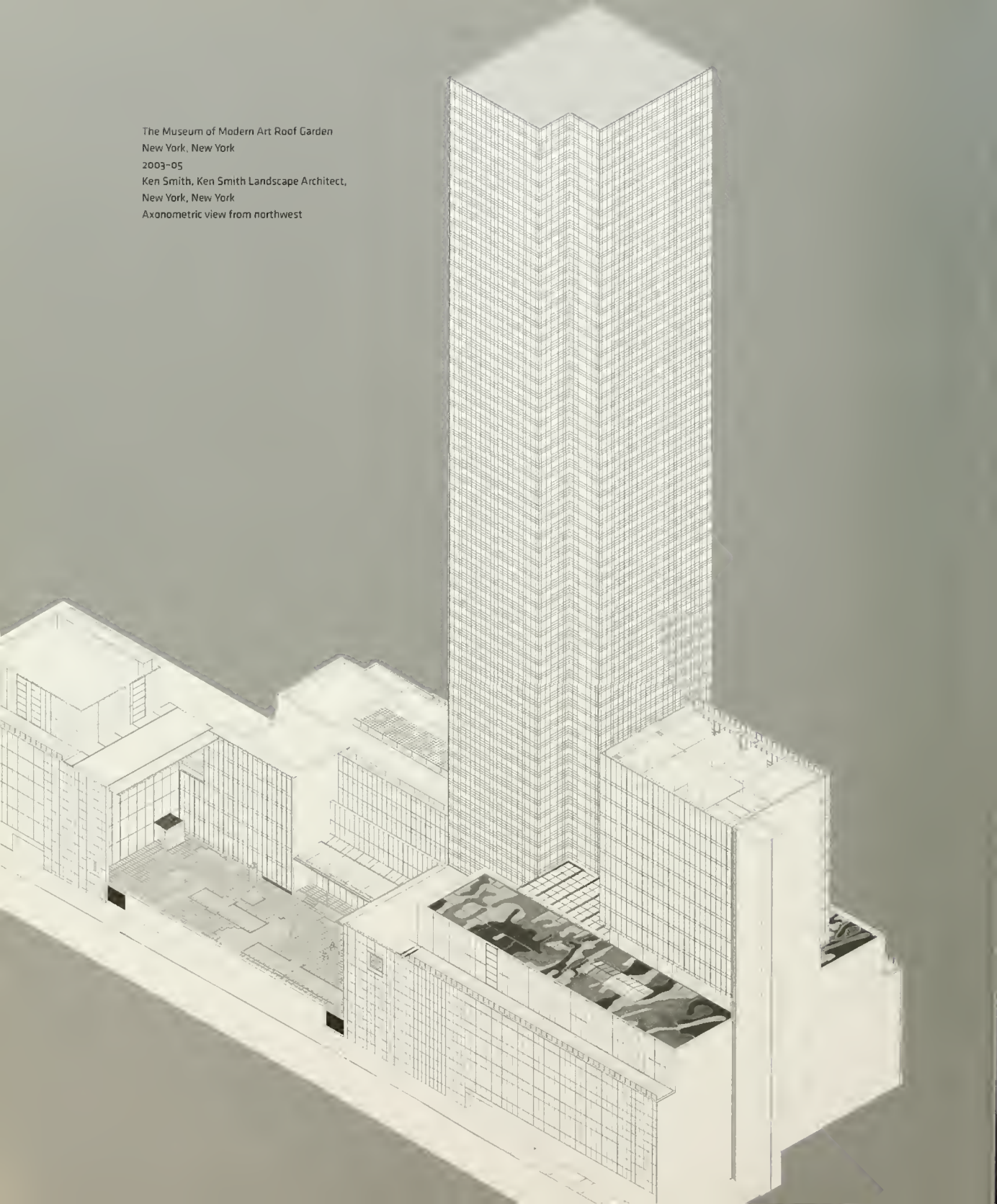
14 In an interesting yet short reference letter in Martin's ENS files, a professor notes that after some debate, Martin chose to study philosophy over law. The debate is attributed to Jacques' personal enjoyment of philosophy outside of the University climate, and his fear that this enjoyment might change or be stifled once his work in the field was formalized or requisite. Echoing Martin's later decisions not to formally join the French Communist Party, it is possible to guess that Martin, unlike Althusser, resisted group adhesion and corporate decision making

15 In a recent interview, Gilles Deleuze describes his own response to 'The Call of Stockholm' in a way which may shed light on Martin's own dilemma Deleuze states: "To be in the French Communist Party at this time, there were cell meetings all the time. It was the time - I have a bench mark - L'appel de Stockholm . I do not know even any more what it was, the call of Stockholm, but that occupied a whole generation of communists. Then me, I had problems because I knew many communist historians, full of talent, and I said to myself. good god, if they worked on their theses, that would be much more important for the Communist Party, which at least would have work at handsome price instead of using them get signatures for the call of Stockholm, stupid call on peace or I do not know what.. and I did not want any part - I was not talkative, I did not speak - and to sign the call of Stockholm, that would have put to me in a state of timidity, of panic... I never did anything to sign with anybody. Moreover, it was necessary to sell humanity, and all that .. I did not want to have any part in the Party .. All the respect of the human rights, it is.. really, one wants almost to take hold of the odious proposals That formed so much part of this soft thought of the poor period we're speaking of It is pure abstract. Human rights, but what is that? It is pure abstract. It is empty It is exactly what one a few moments ago said for the desire, or what I tried to say for the desire. The desire that does not consist in setting up an object, with saying: I wish this One does not wish, for example, freedom and liberty, etc. It is zero. One is in situations." Interview segments from: "G comme Gauche: L'Abécédaire de Gilles Deleuze," 1988. Yet, Martin, unlike Deleuze, did sign the Call. Did he hope to 'shake the feeling that he had missed an opportunity'? By signing, did he hope to redeem his status from its STO taint? Did he believe in the Call's rhetoric and promise? Was he simply part of the era where, as Deleuze said, "The Call was the primary question?" [Author's Translation].

16 Translation mine.

17 Michel Foucault and Martin came up with a nickname for Martin that outlived Martin's 1964 suicide and helped consolidate many of Foucault's theories on madness and reason. Foucault and Martin called Martin by the name he already embodied he was called *l'homme sans oeuvre*: the Man without Work More than a joke about Martin's inability to produce coherent thought, the 'man without work' became the unspoken prototype for what Foucault would later call 'the absence of work' For discussions on the Absence of Work, see: Michel Foucault, "Madness, the Absence of Work," in *Foucault and His Interlocutors*, ed. Arnold I. Davidson (Chicago: University of Chicago Press, 1997), 97-106, along with Moore, *Between Work. Michel Foucault, Louis Althusser and Jacques Martin*. Also Eleanor Kaufman, "Madness and Repetition The Absence of Work in Deleuze, Foucault, and Jacques Martin," in *The Delirium of Praise: Bataille, Blanchot, Deleuze, Foucault, Klossowski* (Maryland: John Hopkins University Press, 2001), and Shoshana Felman, "Madness and Philosophy or Literature's Reason," *Yale French Studies*, no. 52 *Graphesis: Perspectives in Literature and Philosophy*, (1975), 206-228.

The Museum of Modern Art Roof Garden
New York, New York
2003–05
Ken Smith, Ken Smith Landscape Architect,
New York, New York
Axonometric view from northwest



Jacky Bowring

Revealing Concealment:

The Strange Case of the MoMA Roof Garden

Beware: Whoever pretends to be a ghost will eventually turn into one.
Roger Caillois 1935[1]

Who am I? If this once I were to rely on a proverb, then perhaps everything would amount to knowing whom I "haunt."
André Breton 1928[2]

A curious garden has alighted on the newly made-over MoMA, the Museum of Modern Art in New York. Not visible from the gallery itself, since it is on the roof, Ken Smith's camouflage garden is modeled on the generic splotchy pattern of army uniforms and military machines. Smith's garden is presented as "ironic" and a "subversion of camouflage's function to hide or conceal."[3] Such commentary is intended to allude to the artifice of the practice of landscape architecture, where the fake natural is used to disguise "ugly" elements in the environment. Yet this is an underreading of both the garden, and the nature of camouflage. The interpretation of camouflage as intentional disguise is a kind of misprision. The function of camouflage is not simply to hide or conceal. It is a symptom of the perplexing and paradoxical relationship of self and other, and the positioning of an object within its milieu.

Camouflage and mimicry are predicated on concepts of simulation and resemblance, and the desire to produce and discern likeness is ingrained in human experience. In his 1933 essay, "On the Mimetic Faculty," Walter Benjamin aligned mimetic imitation, or mimicry, with all of the "higher functions" of humanity, and pointed to a time when the "law of similarity" governed life, ruling both "microcosm and macrocosm."[4] Benjamin conceived of mimesis as a powerful impulse, and a desire to assimilate the self into the other, a social practice, as a foundation for art and language, stating, "Nature creates similarities. One need only think of mimicry. The highest capacity for producing similarities, however, is man's. His gift of seeing resemblances is nothing other than a rudiment of the powerful compulsion in former times to become and behave like something else. Perhaps there is none of his higher functions in which his mimetic faculty does not play a decisive role."[5]

As a social practice, mimicry is inherently anthropomorphic, a subjective rather than objective perception. Roger Caillois, in "Mimicry and Legendary Psychasthenia" (1933), alluded to the anthropomorphic aspect of mimicry, noting that "the resemblance exists solely in the eye of the beholder."[6] The arbitrariness of apparent camouflage could be illustrated in a landscape context with a plant such as the Chinese Quince, *Pseudocydonia sinensis*. The bark of the Chinese Quince bears an uncanny resemblance to camouflage patterning, it looks as though is has been painted in Flecktarn.[7] The finding of resemblance, however, lies with the beholder, there is no necessary intent on the part of the tree to camouflage itself in such a fashion. Instead it presents the curious spectacle of nature camouflaged as 'nature.'

Camouflage plays an important role in the world of art, far beyond that alluded to in Peter Reed's reference to similarities between Smith's garden and Andy Warhol's *Camouflage* series, some of which are held by MoMA. The links between

the abstracting of nature into camouflage patterns and subsequently into this faux-natural garden are giddily circular. As a shift from the often brightly colored uniforms worn by the military, naturalistic camouflage patterns were developed early in the twentieth century, and became widely used in both World Wars. Artists such as Franz Marc, Arshile Gorky, László Moholy-Nagy and Ellsworth Kelly were enlisted amongst the 'camoufleurs', artists, designers and architects, who developed the various "disruptive pattern" schemes used in battledress and for military equipment.

British artist Norman Wilkinson developed the unlikely "dazzle" camouflage to be used at sea, creating a series of patterns based on Cubist principles. Rather than attempting to disguise the ship by means of blending in, the dazzle approach breaks up the surface through the use of line and color, accepting that within the constantly changing conditions of sea and sky, to attempt a perfect color match was not possible. Instead, patches of bright or contrasting colors and lines were used to counter the actual shape and size of the craft, for example taking a dark color around the bow, from port to starboard, to create a sense of ambiguity about the length of the ship. While the ships were made to appear quite visible in an absolute sense, they were deceptive in terms of their form and scale, and speed and direction, and thus the dazzle scheme underscores the paradoxical relationships between self and other that underlie any philosophy of camouflage.

Bernard Lassus echoes these observations on the apparent incongruity of camouflage. Recalling a 1969 stroll along a quay in Stockholm, the French landscape architect tells how he was "suddenly pulled up short. Emerging from the vegetable mass of building sections I thought I saw in the distance, on the port's horizon, there materialized before me the shape of a long and powerful warship. It had remained hidden thanks to its camouflage. Until then I had thought that camouflage was reserved for the land army. But here the pattern of a paratrooper's battledress, mainly green but also strewn with maroon and streaked with some black, represented a design that had grown to envelop the whole of the boat."[8] The absurdity of a sea-going ship painted in the colors of the land is perplexing, and not unlike the vision of a camouflage garden marooned on the roof of MoMA.

At MoMA the act of camouflage, of a garden simulating a simulation of nature, amplifies the ambivalence that lies at the heart of mimicry. Through the replication of things beyond one's self there comes a sense of porosity and fluidity with the environment. One collapses into one's context, whether from the perspective of an insect or a human. Notions of doubling, uncanniness and mirroring haunt camouflage and mimicry, and are embedded within the perspectives of alterity and selfhood.

Roger Caillois destabilized the benign reading of mimicry, presenting a psychoanalytical examination where the dialogue between self and environment is called into question. Caillois drew attention to the lack of a rational connection between camouflage and survival, and as Dawn Ades explained, both Caillois and fellow camouflage essayist, Jacques Delamain, "challenge any neat division between scientific classification of natural phenomena and poetic metaphors found in nature."[9] Caillois pointed out that the adaptation hypothesis of camouflage is flawed in numerous ways. For example, insects which are unpalatable *anyway* are still camouflaged, as are insects which are hunted by smell, which makes any efforts at visual disguise redundant. Some insects are so well-camouflaged that they are pruned by gardeners, or the "even sadder" case of the Phyllia, who "browse among themselves, taking each other for real leaves..."[10] or cannot find each other when it comes time to mate. The enigma of disguise as display is evident in the *Oxyrrhyncha*, or spider crabs, who

HMS Argus (I49) in harbor in 1918, painted in dazzle camouflage.

"haphazardly gather and collect on their shells the seaweed and polyps of the milieu in which they live ... decking[ing] themselves in whatever is offered to them, including some of the most conspicuous elements..."[11]

Caillois went on to argue that mimicry is thus a "*luxury* and even a dangerous luxury."[12] In fact, camouflage is an act of renunciation of self, a dispossession through mutation. The premise of camouflage as a form of protection and disguise is thus undone, and Caillois reveals its anti-Darwinian tendency, the notion of the *instinct d'abandon*, the instinct to abandon one's self, a motivation more akin to Freud's death drive than any survival instinct.

Caillois's psychoanalysis linked closely to ideas of space, most powerfully with his allusion to schizophrenia. In this context he noted that the invariable response to the question "Where are you?" is, "*I know where I am, but I do not feel as though I'm at the spot where I find myself.*"[13] At MoMA, the sense of an "absent garden" is amplified by the very fact the work is not visible from the gallery itself, adding to the sense of psychosis through feigning the faux, a haunted other. There is a sense of melancholy which pervades such an absent presence. The renunciation of one's presence is perplexing, as a kind of "derealizing" of the experience of space, as a type of depression. This is the "legendary psychasthenia" that Caillois connected to mimicry, derived from psychologist Pierre Janet's writing.

Here, at the "edge of surrealism," the relationships between recognition, estrangement and uncanniness are opened up. The strangeness of the MoMA camouflage garden is in danger of being glossed over through being labelled merely "ironic." Reading the work as surrealistic, however, mines a potent legacy of art, psychoanalysis and formalism that connect the self and camouflage in much more profound and unsettling ways. Caillois had a contentious relationship with surrealism, and was largely marginalised from the mainstream movement of art and literature, yet his influence and connections permeate thinking on the uncanny in many ways. Rosalind Krauss retrospectively applies his approach to Man Ray's photographs which predate Caillois's writings by a decade, and in her analysis of *Return to Reason* (1923) she describes how the "nude torso of a woman is shown as if submitting to possession by space."[14] Man Ray's explorations of the dissolution of the body into space were subsequently echoed in René Magritte's paintings, such as *Discovery* (1927), where the shadows cast on the nude form are transfigured into patches of wood grain veneer. These images from Man Ray and Magritte evoke ideas of camouflage through the surface patterning of the female form, the sense of what happens when an "object fuses with an another object."[15]

Russian Formalist Victor Shklovsky's work on "ostranenie" or "strange making," was closely associated with surrealism.[16] Shklovsky identified a number of devices which make a work "strange" in his efforts to discover the literariness of writing, that is what makes a work poetic rather than prosaic. In the context of the MoMA roof garden, the Shklovskian devices of scale play and the undoing of the connection of cause and effect are of particular significance. The garden is also made strange by the use of fake materials as a substitute for real garden components, recalling Shklovsky's description of substitution in Tolstoy's writing, for example in having a story narrated by a horse. Such a shift causes a change in the apprehension of an object or plot, revealing the extraordinary within the ordinary.

The defamiliarizing potential of Caillois's theory in the context of a psychoanalytical critique is reinforced by his notion of "diagonal science." As opposed to the precise categories of orthodox science, Caillois's in-between or "diagonal" classifications presented the possibility for unlikely juxtapositions. Poetic visions of science weave through the discourses of surrealism and Russian Formalism, as advocated by Caillois's contemporaries, Breton, Bachelard and Shklovsky. In his "Manifesto of Surrealism" Breton proposed a type of epistemological anarchy, because "Our brains are dulled by the incurable mania of wanting to make the unknown known, classifiable."[17] It is thus necessary to navigate beyond the known, the rational, into the dark spaces in between. Indeed the lack of a logical connection between camouflage and survival is what Gaston Bachelard might have referred to as an "epistemological obstacle," something which stands in the way of a logical connection. Bachelard embraced such illogical empiricism, strange coincidences on the axes of poetry and science, and believed it was necessary to "question everything," "to escape from the rigidity of mental habits formed by contact with familiar experiences."[18] In proposing *surrationalism*, Bachelard wrote, "If one doesn't put one's reason at stake in an experiment, the experiment is not worth attempting."[19] Moving across categories in such a way was described by Victor Shklovsky as a "knight's move," where

Camouflage stripes
1 Flecktarn,
2. Chinese Quince,
3. Andy Warhol,
4 Ken Smith

things that are not linearly connected become juxtaposed through an illogical leap. Such unlikely connections created the conditions for "ostranenie."[20]

Now you see Me

Putting the garden on the "couch" reveals much more than a superficial irony in the deployment of camouflage patterning, or a simple statement about artifice in landscape architecture. The camouflage garden is read not as a bravura play on surface, but as a melancholy statement within the urban fabric of Manhattan. Not so much the "apocalyptic wallpaper"[21] of Harold Rosenberg, but perhaps a psychasthenic carpet, or even a ghostly mirror. Camouflage is seen not as benign, but as a locus of "dark space" and "magic," and one of the most significant inheritances of Caillois' work was the response from Jacques Lacan, most notably in the development of his essay "The Mirror Stage." Lacan made direct reference to Caillois and his illumination of the subject through "using the terms *legendary psychasthenia* to classify morphological mimicry as an obsession with space in its derealizing effect."[22] Lacan further developed this notion of the spatial or material mysticism founded in "Mimicry and Legendary Psychasthenia" in his review of Minkowski's *"Le Temps vécu"*, describing, "another space besides geometrical space, namely the *dark space* of groping hallucination and music, which is the opposite of clear space, the framework of objectivity. We think we can safely say that this takes us into the 'night of the senses,' that is, the 'obscure night' of the mystic."[23] Inhabiting this twilight space between an objective abstract pattern, and the troubled subjectivity of the mimic, the garden is something of a haunted Nadja. In André Breton's novel of the same name, the curious Nadja, hovering on the edge of insanity, is characterized by her mimetic skills, taking on various guises and effects, weaving in and out of the city, merging then re-appearing from the milieu.

Adding to this twilight zone of mimicry is the construction of the garden in materials which are fake versions of nature – mock rocks and faux foliage. This evokes a sense of soul sickness as a commentary on the contemporary human condition within the city. It is a garden with a "malady of the soul," one which reveals how the attempts at concealment paradoxically create a condition of weakness. The garden becomes a microcosm of a societal psychoanalysis, simultaneously pushing and pulling itself through its milieu. Disguise becomes display, and the gallery is like one of Caillois's spider crabs, who in grabbing at the things around it in an "automatic" act of camouflage, unwittingly choose something very obvious and make themselves more conspicuous. So, is this what the designer intended? Ultimately it matters little whether or not this reading is consistent with authorial intention: what matters most is the frisson that comes with reading against the grain. And of course, sometimes a garden is just a garden.

Epilogue

I am picturing a sprawling metropolis with glass and steel buildings that reach to the sky, reflect it, reflect each other, and reflect you – a city filled with people steeped in their own image who rush about with overdone make-up on and who are cloaked in gold, pearls, and fine leather, while in the next street over, heaps of filth abound and drugs accompany the sleep or the fury of the social outcasts.

This city could be New York; it could be any future metropolis, even your own.

What might one do in such a city? Nothing but buy and sell goods and images, which amounts to the same thing, since they both are dull shallow symbols. Those who can or wish to preserve a lifestyle that downplays opulence as well as misery will need to create a space for an "inner zone" – a secret garden, an intimate quarter, or more simply and ambitiously, a psychic life.

Julia Kristeva, 1995[24]

endnotes

1 Roger Caillois, "Mimicry and Legendary Psychasthenia," in Roger Caillois, *The Edge of Surrealism. A Roger Caillois Reader*, ed Claudine Frank (Durham Duke University Press, 2003 Original essay 1935), 91 (Note. Rosalind Krauss translates phantôme as "chimera," in "Corpus Delicti." In Rosalind Krauss and Jane Livingstone, *L'Amour fou Photography and Surrealism*. London. The Arts Council of Great Britain, 1985).

2 Andre Breton, *Nadja*, trans. Richard Howard (New York: Grove, 1960. Originally published 1928), 11.

3 Peter Reed, "Beyond Before and After: Designing Contemporary Landscape," in Peter Reed, *Groundswell: Constructing the Contemporary Landscape* (New York: Museum of Modern Art, 2005), 21-22.

4 Walter Benjamin, "On the Mimetic Faculty," in *Selected Writings / Walter Benjamin. Volume 2: 1927-1934*, eds. Marcus Bullock and Michael W Jennings. (New York: Belknap Press, 1996. Original essay published 1933), 720.

5 Ibid.

6 Caillois 2003, 93

7 Flecktarn is a German term (Fleck = spot, and tarn = camouflage) and is one of the most widely used camouflage patterns. It is a speckled rather than blotchy pattern, usually consisting of five colors.

8 Bernard Lassus, *The Landscape Approach* (Philadelphia The University of Pennsylvania Press, 1998), 24.

9 Dawn Ades, "Photography and the Surrealist Text," in Rosalind Krauss and Jane Livingstone, *L'Amour fou. Photography and Surrealism*, 187.

10 Roger Caillois, "Mimicry and Legendary Psychasthenia," trans. John Shepley. In Annette Michelson, Rosalind Krauss, Douglas Crimp and Joan Copjec, *October: The First Decade* (Cambridge, Massachusetts: The MIT Press, 1987. Original essay published 1935, this translation in *October* 31, 1984, 16-32), 67.

11 Ibid, 70.

12 Ibid, 67.

13 Ibid, 72. (original italics).

14 Rosalind Krauss, "Corpus Delicti," in Rosalind Krauss and Jane Livingstone, *L'Amour fou: Photography and Surrealism*, 74.

15 Rene Magritte cited in Jacques Meuris, *René Magritte: 1898-1967*. (Koln: Taschen, 2004), 51

16 Victor Shklovsky, "Art as Technique," *Russian Formolist Criticism: Four Essays*, trans. Lee T. Lemon and Marion J. Reis (Lincoln, Nebraska: University of Nebraska Press, 1965 Original essay published 1917).

17 André Breton, "Manifesto of Surrealism," in *Manifestoes of Surrealism*, trans Richard Seaver and Helen R. Lane. (Ann Arbor: The University of Michigan Press, 1969 Original essay published 1924), 9.

18 Gaston Bachelard, *The Psychoanalysis of Fire*, trans. Alan C. M. Ross (Boston: Beacon Press, 1964), 1, 6.

19 Gaston Bachelard, "Le Surrationalisme" (1936), cited in Denis Hollier, ed., *The College of Sociology, 1937-39*, trans. Betsy Wing (Minneapolis: University of Minnesota Press, 1988), 397, n.2

20 Viktor Shklovsky, "The Resurrection of the Word," in Stephen Bann and John E Bowlt, *Russian Formalism: A collection of articles and texts in translation*. (Edinburgh: Scottish Academic Press, 1973. Original essay published 1914).

21 Harold Rosenberg, "The American Action Painters," *Art News* 51, no. 8 (December 1952), 22

22 Claudine Frank, Introduction to "Mimicry and Legendary Psychasthenia," in Roger Caillios, *The Edge of Surrealism. A Roger Caillois Reader*, 90

23 Ibid

24 Julia Kristeva, *New Maladies of the Soul*, trans. Ross Mitchell Guberman. (New York Columbia University Press, 1995), 27.

Paolo Soleri

Nanotechnology to a science deprived person, me P.S.

26/6/05

Minuteness and Miniaturization

We discover that in the "infinite" smallness of micro-reality, down to the Strings Hypothesis, we can speak of "minute" as in a minuteness of an unbelievable degree: an atom made of billions of strings or something of that sort (blessed ignorance!). But we better not use the term *miniaturized* as in *miniaturization*, because that would have to refer to the miniature of *what*? In the realm of macro existence, i.e. the realm of the willful (the living), there is an implosion of relationships, not a "simple" presence of the minute, rather the minute is organized into miniature performances willed by life. In a way, one can say that miniaturization is willful minuteness. In the absence of the minuteness of micro reality (things, etc.) willed into miniaturization, there is no possible complexity, the very stuff of life.

Miniaturization (and nanotech) is not the minute. A whale is not an assemblage of minuteness. It is the willed assemblage of minuteness, the will constituting the internal combustion engine that separates the living from the non-living. A corkscrew or a space probe possessed by their own will would no longer be mechanism (mindless Howness); they would have become organisms. Not an ounce of will in the fully galactic fireworks, just space cavorting senselessly.

15/7/05

Caught between the quasi-infinitely small domain of sub-particles and the quasi-infinitely large domain of the cosmos, exists (becomes) the macro reality of seas and shoes, glaciers and martinis, Hollywood and slums, Amalfis and slums, Toyotas and slums, universities and slums...the smorgasbord of things dished out by intellection, blessed and plagued by Howness. It is the macro presence we are, produce, and thrive in, utterly dependent from the micro and mega presence of the two quasi infinities.

The "infinitely" small generates the "infinitely" large via a Big Bang. For eons they are silently at each other, inseparable and ferocious on both micro and mega scales. The (first) "verb" of old fame did not surface, it was just an unspoken immensity micromanaged by the "infinitely" small. Eons later the deep voice spoke to the unspeaking duo. "You are getting nowhere. You, micro and you, mega are spinning for the sake of spinning. I will create the macro world. I, the creator of life." The deep voice is a late coming buffoon (five to six million years ago). The fact seems to be that granules of macros dance acrobatically here and there in the ever so exotic nonsense of the micro-mega. It is life beginning to extrude itself from non life, life the willful.

The reflective intellection residing in macro reality, humankind, has no way of perceiving the "infinitely" small and the "infinitely" large. We construe them abstractly, via technology, physics, cosmology, chemistry, and mathematics. Philosophy attempts models of hyper-significance. Theology, however, is befuddlement and deception. Only the esthetic wrests tiny, graceful accomplishments from the "infinitely" small and the "infinitely" large. It is the dramaturgy of *Homo sapiens*.

Since reality (and its *mistero tremendo*) is exclusively *techne*, i.e. how space is generating the endless geometries of the micro, mega, and macro (inclusive of string, wormholes, theorizing, galactic rages, conjecturing, pizzas, and passions), I would call it the Howness of space in constant metamorphosis,

and I would say that nanotech is the fidgeting of space in its geometries of the sub-atomic, cosmic and nanobiotech of the sub-cellular (life-making organisms).

All of the above I take to fit my minimalist (lean) hypothesis that reality comes in two (consequential) parts: Becoming of space, and Being, i.e. the repository, via memory of such Becoming into the space-less past. What happens, the succeeding nows, can't unhappen, therefore the past is "forever." I call it duration.

For years (fifty or so), I maintained that miniaturization, complexity, and duration are the constituents of religiousness. The binding (*religo*), *the mistero tremendo* is dangling in front of our noses.

Recently, I had to add A, for automatism, to the holy triad, M.C.D., thus it is now Miniaturization-Complexification-Duration-Automatism (M.C.D.A). Intellection, confined up to present in organisms not purely aware, but also self-aware, is then the tangible contextual "nature" of reality creating itself not via, but *as* M.C.D.A., the passionate nanobiotechnology of transcendence: full steam religion with not an angel or a great spirit in sight, no, "just plain" reality creating itself.

Automatism is the culmination of *religo*. It is present when *religo* "becomes natural" or apparently effortless. The physiological routines of an organism are "automatic." "Nothing" orders my legs to walk from here to there, rather I do so automatically for a purpose. Thus, I am *religo* in action. Willfulness is its propellant.

6/6/05
The industriousness of automatism:

When on automatic the organism sees to it instantly, that the need is matched by performance. There is no room for delay or procrastination. The immediacy of response to demand is the very context of industriousness in a field where monads are in the tens of billions and all of them are acting simultaneously in the Now. Organisms are industriousness personified, and so this micro-industry spills into the macro-industriousness of *Homo faber*, the fab-bricator. With hands-on and communication skills multiplying, industriousness explodes in the macro (the biosphere), from cottage industry to heavy industry to the mega-industry of the micro-industry, i.e. the mega finds itself in the micro, mediated by macro: intellection.

Miniaturization, complexity, and automatism are the triad that creates duration (the past), a religious journey. The industry of the man made, gross and clumsy compared to the industry of the organic, has reasons to seek automatism, the central virtue of the organic. This is where nanotechnology enters the stage, another feather on the cap of miniaturization, quasi-knocking at the door of the mega from its treasured micro-natured wilderness. (Man penetrating the cosmos.)

28/5/05

Life is profoundly *reli-gious*, as all organisms are. The more complex an organism, the more religious it is, because the more monads compose the organism, the more numerous the instances of bonding (*religo*) among them. In this sense (the rationale), a planet fully rile-gated is a non-mediated religion. The "urban effect" is the *vulgota* of religion.

The urban effect is religo, the most complex manifestation of binding, and it seems to have degrees of interdependence and interaction higher than anything working in the solar system. The biosphere is the longest interactive phenomenon, but it is deprived of self-awareness of its components. Organisms, however, each with their indispensable halo of environmental components (contributors) linking awareness, are in a ledger below the religo of the city. Whereas the biosphere can do without the self-awareness of its members, whether the lily of the field or the salmon of the seas, the Homosphere is utterly dependent on the biosphere (sun included) and self-awareness.

That all organisms are profoundly religious also stands for the techno-social-cultural-hyper organisms. Reality does it all by her little self, without mediators in sight: great spirits, gods, archangels. No intrusions of that kind. (This is the most incontrovertible statement I have ever made, forty years to get at it.)

If nanotechnology is in a quest for "meaningful" bonding in the wilderness of the atomic and subatomic, then it is working at the very foundation of religiosity. In a way, it gives a face to the facelessness that reality seems to be about. Thus, nanotechnology is the base of the escalator climbing from meaninglessness to meaningfulness, religion all the way, the religiosity of bonding, the religiosity of *religo*. Holy technology!

Now here comes the dramaturgical bent of *Homo sapiens*' brain. Is it disruptive, destructive, or is the sneaky way of the esthetic investing in the nanotechnological revolution? If life is the nanotechnological becoming willful, then the evolutionary

march of (incrusted) complexity has to dramatize its own pain and suffering (the esthetic world).

The rosary beads of nanotech-religo-drama-esthetic can be the carrier for the genesis of grace if the dramaturgical-esthetic does not fall from grace into the caldron of animism and theology. But the fall cometh and has lasted six million years, give or take one or two or three. It is the price we are paying for the blossoming of the esthetic. The "grace divine" is in search of itself while tunneling into the dumbness of pristine reality. The tunnel is wired bright by the esthetic objectifications, theater, and all the arts. The uncontainable brightness of a possible conclusion is entirely conjectural, hypothetical, and about the non-existent because the future does not exist. What has begun to exist is the passion for the creation of more past, the Becoming. That same Becoming contaminated by the animistic-theological bias, the one tenacious encrustation that calls for blood: the "holy" invader with its "holy" wars.

Animism (and theology) is a misguided attempt to pay homage to something greater than life: the "spirit." It is a wretched anticipation of the unspeakable and indulges in unspeakable deeds so as to remain faithful to the task. In fact, faith offers the sustaining and proclaimed guidance for whom? Only for the faithful, the Hindu faithful, the Judeo faithful, the Christian faithful, the Islamic faithful... The whole animistic world is a gigantic conjectural machine of great dramaturgical power and no religious content (a zero content is no content).

2/6/05

It might help in the hypothesis of reality as space if we drop the connotation that space is a sort of casserole in which we can cook, fry, boil...The episodes of reality are confronting us. There is no casserole of space, rather space is an unlimited number of self-cooking, self-creating novelties of the Becoming. Its metamorphoses are spellbinding! (And generates the past, the memory of itself.)

Memorized and memorizing "machines" that we are, we are all absorbed in generating more pasts to enrich our memory banks, which collectively is the repository of self-creation.

The whole of reality, ourselves included, is the *mistero tremendo*. In our innocent arrogance we want to define it, yet are unable to see that we are the exact process of self-definition, all of the mistero tremendo included in its Becoming. The trueness of the process precluding the presence of Truth as *causa prima*.

As there is no *causa prima*, there is a *presence prima* (Big Bang?). Reality will need an immense contribution of faith to fathom "*causa ultima*," to find the black hole of naught. The Omega Seed, so to speak, of self-revelation is reality creating itself.

This is only the first part of a longer paper. For the second half contact:
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Fig. 3: A student learns how to serve the main of the house. President Truman's Point IV Program in Iran. The Home Economics [illegible]
Tabriz, Iran 1954

Z. Pamela Karimi

Policymaking and Housekeeping

President Truman's Point IV Program and the Making of the Modern Iranian House.

Mandates

The post-WWII period is generally considered one of the most pivotal in the modernization of many Middle Eastern countries. Since the early 1950s, intervention by the American government in the Middle East has led to changes not only in the cultural patterns of life and economic structures, but also in developments within the realm of architecture – both urban and domestic. Iran offers a perfect means to examine the substance of this process, because as Douglas Little in his book *American Orientalism* reminds us, "nowhere in the Middle East did the United States push more consistently for reform and modernization after 1945 than Iran, and nowhere did America fail more spectacularly."[1] "What is going on in Iran," said President Lyndon B. Johnson in 1964, "is about the best thing going on anywhere in the world."[2] Armin Mayer, Johnson's ambassador in Tehran at that time, also confirmed that "the Shah is making Iran [a] show-case of modernization in this part of the world."[3] But how did this showcase come into existence? The dramatic expansion of American political and economic influence in Iran after the Second World War has been thoroughly analyzed. In contrast, the concurrent intensification of the cultural presence of the United States in this region is under-researched.

Relying on first-hand written reports, visual documents, charts, and maps compiled by American officials in 1954 and currently housed at the visual archives of the Library of Congress, I consider the nature and consequences of an American post-WWII mission in Iran that established a Home Economics Department, which aimed at promoting homemaking educational programs for women to help improve Iran's domestic life. The activities of this department were supervised by the U.S. Division of Education and Training, and were part of President Truman's Point IV Program for Iran. The Point IV Program was established to promote U.S. foreign policy and to assist with the development of certain economically underdeveloped countries. The Program's sector in Iran was meant to improve Iranian industry, communication, transportation, general services, housing, and labor. The process was carried out through joint operations involving American officials and various ministries, agencies, and institutions of Iran.[4] Each year roughly one-eighth of the amount given to each Western European country as part of the Marshall Plan was dedicated to Iran to support housing and education programs.

Makeovers

By establishing Home Economics schools in Iran's major cities, American authorities planned to help young Iranian women refine their domestic skills, improve the quality of their food and cooking methods, consider their family's health and hygiene, and develop "good taste" in decorating and furnishing their homes. These training programs recommended a hygienic and practical arrangement for living rooms and kitchens that would create labor-saving houses.[5] This "new housekeeping" presumably took less time, was less tedious, and turned the housewife into a "professional" worker. A great portion of the program focused on the kitchen, the center of household labor (Fig. 1 & 2). By using time charts, meal plans, and inventories, women would become plant managers. The ramifications of the project were, however, far more extensive. Changes in family structure, gender relations, habits of consumption,

and the encouragement of a consumer culture were the most important aspects of the program.

While educational programs brought new ideas to Iran, they also carried out politically oriented economic strategies. Indeed, the changing idea of the house was a *microcosm* of the changing Iranian society in the 1950s. To paraphrase a U.S. military planner, Cornel Harold Haskins, it was not just for humanitarian reasons nor even for any idealistic democratic principles, worthy as these may be, that the United States was forced to take an interest in Iran.[6] We must remember that the Point IV Program took place within a larger socio-political atmosphere that resulted from the cooptation of Iranian authorities by the U.S. government in the early years of the Cold War (here I am referring to the 1953 CIA Coup in Iran, which resulted in the overthrow of Dr. Mossadegh's government and the empowerment of the Shah).[7]

In all likelihood, the Point IV Program was meant to protect the Iranian society from social tendencies that could bring about a socialist movement similar to that of the USSR (Fig. 3).[8] This notion is particularly important, considering that by 1951 economic and political relations between Iran and the Soviet Union were already established, and a demarcation agreement was signed in Tehran by a Soviet-Iranian joint commission. This Soviet-Iranian rapport caused Associate Justice William O. Douglas of the U.S. Supreme Court, in his travels to Iran in 1950, to express the hope that "we [the U.S.] will write their [Middle Easterners] history instead of letting Soviet Russia do it."[9] U.S. policy makers believed that the most critical challenges confronting Iran were economic modernization and land reform, without which Iran would remain "an incipient China."[10]

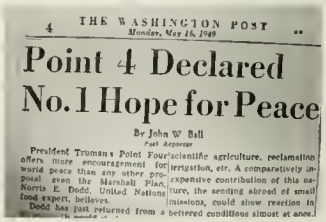
But why was preventing Iran from falling into the Soviet sphere so crucial? The economic recovery of Western Europe was fueled by cheap Middle Eastern oil, much of which came from Iran.[11] The loss of this oil could slow or overturn Western European economic revitalization. More importantly, these oil resources would be considered necessary in case of war with the Soviet Union. Similarly, the Soviet Union's ability to succeed in a global war would be extensively enhanced by control of Iranian oil.[12]

Given the requirement that Iran be kept independent without provoking a clash with the Soviet Union, the Truman administration hoped that a "quiet diplomacy" would produce the desired results. The ideas of the Point IV Program and the consequent homemaking programs were certainly spread by this so-called quiet diplomacy. Point IV's Division of Education and Training began its work by putting a program of Home Economics into a girls' school in the city of Tehran. Later, a similar program was introduced in other major cities (Fig. 4). The ultimate goal of this project extended beyond temporary changes in the Iranian residential space and was to make long-term household improvements. That is why educational programs played an important role in the process of transformation of the Iranian domestic space. The preliminary proposal of the Point IV Program makes this process clear. In putting forward the Program's bill at the meeting of the Committee of Foreign Affairs to the House of Representatives in 1949, Acting Secretary of State James Webb said, "the program has larger goals and is meant to be the beginning of a movement that can reach far into the future and, in time, change civilization profoundly for the better."[13] At the same meeting, Willard L. Thorp, Assistant Secretary of State for Economic Affairs, made it clear that the program was directly geared toward a change in the societal structure. He said,

> *When one is talking about underdevelopment, one is not just talking about the fact that there are no machines in the area that are not industrialized. One is talking*

Fig. 1 & 2 The kitchen laboratory at a school in Isfahan

Fig. 3: "Point 4 Declared Number 1 Hope for Peace"



4 THE WASHINGTON POST
Monday, May 16, 1949

Point 4 Declared No. 1 Hope for Peace

By John W. Ball
Post Reporter

President Truman's Point Four offers more encouragement for world peace than any other proposal even the Marshall Plan, Norris E. Dodd, United Nations food expert, believes.

Dodd has just returned from a

scientific agriculture, reclamation irrigation, etc. A comparatively inexpensive contribution of this nature, the sending abroad of small missions, could show reaction in bettered conditions almost at once.

about a number of interrelated factors which all put together make up a more advanced society ... You achieve economic developments not just with the things that relate specifically and directly to productive techniques, but with fundamental things that bear on the capacity to produce: namely education ... organization and so forth.[14]

Based on this commentary, it is no coincidence that education played an important role in cultural changes undertaken by the Point IV Program. The homemaking programs in Iran were modeled after instructions that, by the 1950s, had existed in the U.S. for over half a century. In the U.S., the homemaking educational programs dated back to the late 1870s. In fact, training in domestic activities was a post-Civil War phenomenon. According to Gwendolyn Wright, most home economist specialists wanted to educate a great many consumers rather than a few good women designers. Moreover, greater standardization in American houses seemed a sign of democratic equality, presuming that greater similarity between individual dwellings would create a more homogenous community. Therefore, in the American context, the concern was not just a break with the ornate stuffiness of the past or a break with the unprofessional and unhygienic environment of the old house, but rather it was employed ideologically to change larger aspects of culture.[15] It becomes clear that educating American consumers to identify good houses was an important means of changing American domestic architecture.

In a similar vein, the improvement of residential spaces in Iran generally took place, first and foremost, by means of educational programs. American educational projects targeted women as the main subjects of this consumer culture. But according to Bernice W. King, the head of Iran's Home Economics Department and the attachée of the U.S. Department of Education,[16] the introduction of Western domestic furnishing and Western models of living also "gave a real opportunity ... to raise the level of living for the country as a whole." King reports,

> *The some basic needs were found everywhere ... After countless interviews, much digging into gross root needs, close observation of girls' schools of secondary level and homes of the destitute, the very poor, and the average and the wealthy. I was able to dream a dream and was ready to try to make that dream come true.*[17]

Issues of the design and decoration of the house were a fundamental aspect of the training process that directly influenced Iranian lifestyle. The home furnishing section of the program required the planning and the design of one complete school, which was actually a model house, initiating a preliminary design for the imminent modern Iranian house (Fig. 5). These designs included the floor plan and site plan of the school, plantings, and color combinations for each room of the house – as applied to furnishings, walls, floors, and finishing – as well as the design of china, wood, silver, and glass used in the home. Each school was furnished with two sofas with springs and upholstery, coffee tables, armchairs, and seats, all made of walnut (Fig. 6 & 7). These plans were prepared by American specialists and were required to be used for all the schools; even in remote and relatively poor cities like Yazd and Ahvaz.

In one of her trip reports, Ms. King expressed an enormous concern with the traditional Yazdi house in which the education programs were to take place. King's description of this house/school is, in essence, a negative portrayal of the traditional Iranian house. She notes,

Fig 4: Soraya Pahlavi, queen of Iran, at the opening ceremony of the Isfahan's Division

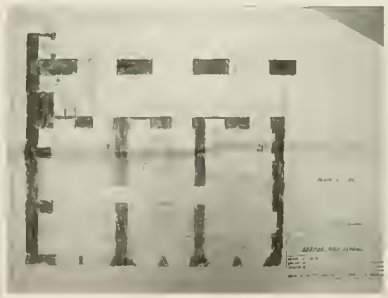


Fig 5: Plan of a school/model house in Kirman Kerman's Division.

> *We proceeded to the school, which was surrounded by the most primitive* kouches *[alleys] I have seen. Deep down in a large enclosure the building was found ...of equipment, there was nothing in the rooms... There was no ...dining table, cupboard, cabinets, ...or anything else.*[18]

In fact, in various places in the report, Iranian home furnishings are severely criticized, and King emphasizes that there is a great ignorance among all Iranian families in household care by saying, "Even in the homes of the wealthy I found a lack of basic knowledge about the choice and care of furnishing."[19]

But were these wealthy homes really in need of change? Perhaps what to King seemed wrong was the fact that the traditional Iranian house was a communal unit (Fig. 8). The extended family resided in this communal unit, arranged by marriage, and the physical arrangement of the house gives evidence of this type of unit. The general plan of the traditional Iranian house was an open rectangular courtyard, with rooms on two or four sides. In the typical upper class traditional urban house, the rooms housed members of the extended family in single-family units. Although the courtyard house was created because of geographic, topographic, and climatic conditions of various regions in Iran, the overall arrangement of the interior of this house was based on kin relations. One can thus argue that kinship transformations and changes in the spatial arrangement of the Iranian house turn on the same axis.

Thus, although at first glance the project seemed geared toward women, the rhetoric of masculinity and femininity worked powerfully to re-construct the identity of both sexes. Certainly changes in cooking, hygiene, and other domestic activities that were taught in the schools, as shown in the albums of the Division of Education and Training, created a new female desire for Westernized products to be used in their advanced kitchens and houses. They also brought about a new male desire concerning both the house and the housewife. Not long after the program began, some Iranian men remarked that they "would not marry any girl who had not received some of the new training in the Home Economics"[20] (Fig. 9). The disciplined figure of the woman plays a crucial role in the album of the Point IV Division of Education and Training. Women in these schools, according to King, had to "learn things by doing,"[21] which was the basis of the curriculum of home economics for Iran. The figures of women, as shown in the albums, seem to be appropriate metaphors for the modern household (Fig. 10 & 11). Women are paradoxical figures who have both a close relation to what happens in the room and who are also alienated from it. A woman's body, in these photos, is a site of discipline, control, and regulation. These photos suggest notions of proper and improper boundaries and illustrate a new relationship between woman and the house.

But this crafting of new modes of behavior, taste, and ultimately desire was not limited to gender relations. The creation of desire for the consumption of American goods was perhaps even more important. As mentioned earlier, a major goal of the Home Economics Department was to transform the traditional house from a self-contained entity to a consumer unit. In the traditional house, most of the food was prepared, and some herbs and vegetables even grown in the courtyard. The introduction of a variety of table design and food preparation (packaging, preserving, etc.) transformed everyday domestic Iranian life and turned it into an American way of life, one that included mass consumption (Fig. 12).[22]

More importantly, newly introduced American rituals of dining – the preparation of meals, and the process of cookery – suggested a distinctly expressive architecture and spatial arrangement, dissimilar from those of the traditional Iranian house. "Table service and etiquette" were a major part of the

Fig. 6 & 7: examples of suggested interior designs for the living room. Shiraz's Division.

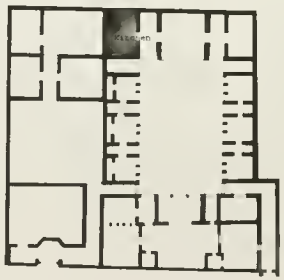


Fig. 8: Reproduction of the plan of a traditional Yazdi house in Iran.

training in the "food and nutrition" section of the curriculum. Here, I would like to suggest that the transformation of the Iranian house can be understood through changes in what Elizabeth Collins Cromley calls "a food axis," or the relationships between cooking, storing, serving, eating, disposing, and the tools and furnishings that make them possible.[23] The curriculum of the Home Economics Program indicates that most changes in the Iranian house design perhaps were not necessarily the by-products of architectural thought, but imposed through changes in food-related rituals.

Models

In Iran debates over women's issues and feminism, in particular, have a long history and go back to 1865.[24] There is indeed a precedent for the education of Iranian women on issues of house care, domestic hygiene, and issues of consumption. Historian of Modern Iran, Afsaneh Najmabadi, writes,

> *By the first decade of the [twentieth] century, women had taken charge of girls' education, wrote tirelessly in the press on female education, encouraged women of means to put their resources into this cause, organized fund-raising events, and provided free schooling for those who could not afford it. The early girls' schools were all established by women and often in their own residences.*[25]

The 1930s marked the most intensive period of economic recovery in Iran. For Reza Shah, as for many other reformers in the Middle East such as Atatürk in Turkey, modernization was associated with Westernization. Reza Shah's goal was "to re-build Iran in the image of the West."[26] During the two decades of the Reza Shah's reign (1925-1941), the government financed many state and public buildings as well as the construction of urban facilities and roads. An orthogonal grid of modern boulevards and streets was superimposed on the old city. The old citadel of Tehran became an administrative center where monumental ministries replaced royal mansions. While foreign architects were hired to build new administrative buildings, local architects who were mostly graduates of European architecture schools initiated the design of Western type residential buildings.[27]

Further, the training of women in domestic matters was not something new to the Iranians who had lived through Reza Shah's Westernization projects. Indeed, the early years of Reza Shah's reign were pivotal in the struggle for the rights of Iranian women. The 1936-41 Woman's Awakening was a state project that "offered new opportunities in employment and education for some Iranian women in exchange for the requirement that all Iranian women abandon their veils in public."[28]

If there were Iranian women and Iranian houses that were already modernized, why did the American project for modernization of the Iranian house in the aftermath of WWII seem so crucial to the Truman administration? Perhaps two reasons made the American project more influential than the previous ones. In the past, most changes happened only among a limited group of upper class families. Whereas formerly "good taste" was the distinguishing feature of a certain class, after the American postwar project the explicit discourse of what defined "good taste" included all groups in the society – the nation as a whole. Another important factor that made the post-war domestic discourse distinctively progressive was not simply because it came with heavy doses of hygiene, different modes of the consumption of food, and a distinct family structure (much of which had earlier roots, after all), but that it was attempted on a mass scale to re-orient Iranian economy toward mass market production (Fig. 13).[29]

Fig. 10 & 11: Students learn how to clean the house at a school in Shiraz.

Fig. 13: Students learn how to use Micro ovens at a school in Tabriz.

Fig 12: Students learn how to prepare and preserve food at a Tehran school.

Missions

But such relationships with America have a longer history in Iran and go back to the arrival of the first American missionaries in 1838. Records of late nineteenth-century American missionary activities in Iran show distinct similarities to later intervention in the mid-twentieth century.[30] Reforming housing practices was among the missionary's first priorities, and such a focus on changing the house had important ramifications for both transformations of lifestyle and habits of consumption. This phenomenon is perhaps due to the fact that so much is at issue in the domestic domain. Houses converse tellingly with issues of gender, sexuality, and the structure of the family. Houses are also societal maps both in their literal shape and in their multifaceted usage.

As an American missionary worker in Palestine wrote in 1914, Muslim women tended to veil not only their physical selves from outsiders but their homes as well. However, the fact that this "veil" created a closed society did not serve to diminish missionary desire to overcome the secret behind it. "Like plucking the apple from the tree of knowledge, knowing the secret behind the veil would ... expose one to a world of sin and heighten one's obligation to reform it."[31] More importantly, as many historians point out, there is the relationship between American missionary activities and American political interest and capitalist expansionism in the Middle East, which was primarily employed in the domestic realm.[32] In 1826, the American missionary writer, Samuel Bartlett, admired Presbyterian schools for providing not only a Protestant education, but also an "Anglo-American mind" and "Yankee reasoning," even in "wild Kurdistan." More importantly, he mentioned that through missionary schools, household supplies of America, such as clocks, chairs, tables, sewing machines, and even flowers would penetrate the remote regions of the Orient.[33] These remarks indicate the extent to which the American missionary in Iran perhaps indirectly served the early intentions of capitalism by the introduction of the consumer culture that was often reflected in the domestic domain and the kitchen. Little has also elaborated on similar effects of American intervention in the Middle East:

> *The Middle East began to loom larger on America's diplomatic and cultural horizon during what Mark Twain called 'the Gilded Age,' not only because U.S. missionaries sought to save more souls but also because U.S. merchants sought to expand trade. By the 1870s American entrepreneurs were buying nearly one half of Turkey's opium crop for resale in China while providing the Ottoman Empire with everything from warships to kerosene. 'Even the sacred lamps over the Prophet's tomb at Mecca,' one U.S. diplomat gloated in 1879, 'are fed with oil from Pennsylvania.'*[34]

In a similar vein, the Home Economics Program was, first and foremost, concerned with fiscal and health issues; later, however, it created modes of desire and fashion, resulting in social transformation of the society as a whole. At the time of the American Point IV Program, which lasted for nearly two decades, both the "modern house" and the "modern Iranian woman" constituted important components of the image of a new Iran. In the popular magazines of the early 1950s Iran, certain types of seemingly related images of women and the house are shown. Matters of health were closely associated with matters of beauty (to be simple and beautiful is to be clean, etc.). Many illustrations are focused predominantly on women's images juxtaposed with both private and public spaces. In this momentous period of shift, all images depict (mostly anonymous) Western figures whose faces were enthusiastically idealized, calm and in control. These images were thus not conveying what Iranian women were, but what they could be. In the years following the program's implementation, similar types of images overwhelmed the media. The glamorous beauty of the Hollywood film industry, for example, penetrated the Iranian periodical press at large.[35]

Malfunctions

The activities of the Home Economics Department in Iran marked the beginning of a movement through which consumer culture became the norm and capitalism infiltrated most aspects of daily life, including such personal spaces as the kitchen. Although the encouragement of this culture has a longer history and goes back to the Presbyterian missionary activities and several other influences, in the 1950s this encouragement was directly connected to Cold War animosities. The U.S. policy toward Iran under the Truman Administration is only one case, but it is an important one because it suggests that U.S. Cold War policy in the Middle East has been conducted through means that are not readily understood as "political." As the 1959 Moscow "Kitchen Debate" between Khrushchev and Nixon demonstrated, Cold War animosities functioned on wildly diverse scales,

featuring missiles, automobiles, and toaster ovens. Iran, as an Islamic country, arrived at such postwar debates with another important factor: religion and its overwhelming presence in everyday life.

Considering this fact, it is no coincidence that in the aftermath of the Islamic Revolution, many political and religious figures, including Ayatollah Khomeini, wrote and spoke about re-Islamization of women, family, and the household. They severely criticized the Western lifestyle and the Western-looking Iranian women, alike. One of the most committed voices was that of Mir Hossein Mousavi, the third Islamic Republic's Prime Minister and a trained architect, who sought to legitimize the Islamic Revolution's cause by criticizing the "Americanization" of Iranian culture and architecture. He underlined the disparity between the alien modern Western architecture and the genuine Islamic architecture of Iran. In a speech delivered in 1982 at the School of Fine Arts at Tehran University, he said: "One could feel like a stranger upon arriving at any of the buildings commissioned by Western and American architects under the 'American regime' of the Shah."[36] In fact, many revolutionary art critics reduced what they called the "Americanized" culture of the Shah's era to *mobtozal* – a term loaded with nuances ranging from corrupted and debased to gaudy and kitschy. These remarks show that the educational activities of the Home Economics Department had an impact not only at the local but also at the political level. The modern nuclear family introduced by the Home Economics Department thus played an active role in producing a new image of the modern Iranian household and invoking political and national concerns. In short, the American mission to "better" the Iranian domestic environment was never simple or innocent; it was more than just providing Iranian families with what Bernice King described as "happiness and security."

endnotes

1 Douglas Little, *American Orientalism. The United States and the Middle East Since 1945* (Chapel Hill and London. The University of North Carolina Press, 2002), 215.

2 Ibid , 221.

3 Ibid

4 *Act of July 1, 1951-June 30, 1952 on The Point Four Program in Iran Report*. (Tehran: Agriculture College of the University of Tehran, 1952), NTIS.

5 In her book, *More Works for Mother*, Ruth Schewartz Cowan reminds us that these houses (with advanced kitchens and technological tools) were not laborsaving and timesaving at all. She mentions that in the beginning of the twentieth century, the vast majority of American women spent most of their hours feeding, clothing, cleaning, and sustaining themselves and their families; eighty years later (1980), American women still spent many of their waking hours feeding, clothing, cleaning, and sustaining themselves and their families, albeit with markedly different tools. See further, Ruth Schewartz Cowan, *More Works for Mother. The Ironies of Household Technology from the Open Hearth to the Microwave* (New York. Basic Books, 1983), 151.

6 Habib Ladjevardi, "The origins of U.S. support for an Autocratic Iran," *The International Journal of Middle Eastern Studies* 15 (1983), 228.

7 By the end of 1952, it had become clear that the Mossadegh government in Iran was incapable of reaching an oil settlement with interested Western countries Mossadegh had also cooperated closely with the Tudeh (Communist) Party of Iran. In view of these factors, it was estimated that Iran was in "real danger" From the point of view of the United States the aforementioned factors would mean a victory for the Soviets in the Cold War and a major setback for the West in the Middle East See further, Stephan Kinzer, *All the Shah's Men. An American Coup and the Roots of Middle East Terror* (New Jersey: John Widely & Sons, 2003).

8 The details of the emergence of this mindset are beyond the scope of this essay, but one event - the Azerbaijan Crisis of 1946, when the Soviets threatened to extend their relationship with Iran - must be considered a major factor in shifting the policy of the United States to a Cold War mood.

9 Moreover, in his 1950 speech at the University of Tehran, Douglas said that Iran needed a reform program of "perhaps 10% communism, 15% capitalism, and 75% something else..." See further, John Donavan, *U.S. and Soviet Policy in the Middle East 1945-56* (New York: Facts on Files, 1972), 97-98.

10 Little, 222.

11 The Korean conflict, especially the Chinese intervention in October 1950, was another factor that significantly increased the geopolitical importance of Iran See further, Francis J. Gavin, "Politics, Power, and U.S. Policy in Iran, 1950-1953," *Journal of Cold War Studies* 1.1 (1999), 57.

12 Ibid., 56.

13 U.S. Congress. House *International Technical Cooperation Act of 1949* 81st Cong., 1st sess, H.R.5615. *Congressional Record*, 1, no.1, daily ed. (Sep 27 1949): H R.5615.

14 Ibid.

15 Gwendolyn Wright, *Moralism and the Model Home* (Chicago and London. University of Chicago Press, 1980), 164-166.

16 From 1952 to 1962, King served as a home economist educator in countries such as Iran, Egypt, Lebanon, and Turkey

17 Bernice W King, 1954, U S Office of Education, Home Economics, Division of Education and Training. LOT 9235 (G) LC P&P BOX 1of 3, Library of Congress.

18 Bernice W King, 1954, U.S. Office of Education, Home Economics, Division of Education and Training. LOT 9235 (G) LC P&P BOX 2 of 2, Library of Congress

19 Ibid

20 Bernice W King, 1954, U.S. Office of Education, Home Economics, Division of Education and Training. LOT 9235 (G) LC P&P BOX 1 of 2, Library of Congress

21 Ibid

22 After all, the very act of photographing and documenting the activities that took place in these schools took Iranian women from their intimate and private kitchens into what Thorstein Veblen called "conspicuous consumption." See, Thorstein Veblen, *The Theory of the Leisure Class* (New York: A M. Kelley, bookseller, 1964 [c1923]).

23 See Elizabeth Collins Cromley, *Alone Together. A History of New York's Early Apartments* (Ithaca: Cornell University Press, 1990), and "Transforming the Food Axis: Houses, Tools, Modes of Analysis," *Material History Review* 44 (Fall 1996), 8-20.

24 See further, Afsaneh Najmabadi, "Crafting an Educated Housewife," in *Remaking Women: Feminism and Modernity in The Middle East*, ed. Leila Abu-Lughod, (New Jersey: Princeton University Press, 1998), 91-125. Also see, *Ruyorui zan va Mard Dar Asr-i Qajar Ou Risaleh (T'odib al-nisvan, Ma'ayib al-rijal)*, eds. Hasan Javadi, Manijeh Marashi, and Simin Shikarlu (San Jose: Cypress Printing, 1992), and Houshang Chehhabi, "The Banning of the Veil and Its Consequences," in *The Making of Modern Iran: State and Society Under Rezo Shah, 1921-1941*, ed. Stephanie Cronin (London: Routledge, 2003), 193-210.

25 Najmabadi, 107.

26 Ervand Abrahaminan, *Iran Between Two Revolutions* (New Jersey: Princeton University Press, 1982), 124

27 Mina Marefat, "The Protagonists who Shaped Modern Tehran." In *Teheron Capitale Bicentenaire*, eds. C Adle and B. Hourcade, 95-125 (Paris: Institut Français de Recherche en Iran), 102

28 Camron Michael Amin, *The Making of the Modern Iranian Woman: Gender, State Policy, and Popular Culture, 1865-1946* (Gainesville University Press of Florida, 2002), 1.

29 By the second half of the 1970s, the Iranian market was overwhelmed with American commercial goods coming from different corporations ranging from Colonel Sander's Kentucky Fried Chicken to Westinghouse Company. In fact, in 1970 the values of U.S. exports to Iran amounted to $326 million and from 1970 to 1973 these amounts increased significantly. At the time, Iranian exports were expected to be more than double in five years to more than 2.5 billion pounds. See further, Feruz Ahmed, "Iran: Subimperialism in Action," *Pakistan Forum* March-April (1973), 11.

30 For most of Iran's modern history, the Western influence meant just the European one. Nevertheless, American missionary educators and medical healers had a consistent presence in Iran and were highly influential.

31 Pelin K Başçi, "Shadows in the Missionary Garden of Roses: Women of Turkey in American Missionary Texts," in Zahra F. Arat, ed., *Deconstructing Images of the Turkish Women* (New York. St. Martin's Press, 1998), 108.

32 Ibid., 101.

33 Samuel C. Bartlett, *Historical Sketches of the Missions of American Board* (New York: 1862; reprinted. New York: Arno Press, 1972), 26-27.

34 Little, 14

35 These images appeared in such magazines as *Ittoʿot Mahiyon-e*, *ʿAlam-e Zanan*, and *Mehregon*.

36 See, Mir Hossein Mousavi, "Pakizeh Sakhtan Sahat Honar Eslami *[Re-evaluationg Islamic Art]*," *Foslnomeh Honar* (1361 [1982]), 209. It should be noted that Mousavi was one of the earliest prime ministers of Iran. The first Prime Minister, Mehdi Bazargan, was appointed by Ayatollah Khomeini as provisional prime minister in 1979, but he resigned within a year, complaining that radical clerics were undermining his government The second Prime Minister, Muhammad Rajaie, was assassinated along with more than seventy members of the Islamic Republic Party in a terrorist bombing in June 1981.

Olga Touloumi

The "Uncanny" in Franz Kafka's text *Der Bau*

What we call trauma takes place when the very powers that we are convinced will protect us and give us security, become our tormentors: when the community of which we consider ourselves members turns against us or when our family is no longer a source of refuge but a site of danger. Jenny Edkins[1]

Reading the definition of trauma by Jenny Edkins, a desire of paraphrasing it emerged. It is not "when" does "what we call trauma" take place, but "where." Where do we stand convinced of protection and security? And, thus, which is the place of refuge that could invert into a site of danger for the traumatized subject?

In 1923, Franz Kafka writes the short story *The Burrow* after the diagnosis of tuberculosis.[2] The protagonist of the story is a creature in its pursuit of the "perfect shelter" that would protect it from the "dangerous other." This creature is described as an in-between animal/human condition automaton that, urged by its anxiety, proceeds in the materialization/construction of its ultimate "shelter," its "home." We do not know when the construction began. Franz Kafka has his protagonist claiming in the beginning of the short story that he has completed the construction of the burrow and that "it seems to be successful,"[3] however the unfolding of the narration will reveal the incompleteness underlying this exact phrase. The dweller oscillates between doing and undoing, constructing and erasing, forever trapped in the midst of his effort. The construction is mended to be a mechanism of control, an apparatus of exclusion of the other and inclusion of the self in the pursuit of the ultimately homely environment.

Speaking about the "homely," I could not resist a more or less Freudian approach to the *heimlich* through the notion of the *unheimlich*, often translated as "unhomely" and/or "uncanny."[4] An excessive documentation of all possible meanings attributed to the homely, in the end leads Freud to the assumption that "*heimlich* is a word the meaning of which develops towards an ambivalence, until it finally coincides with its opposite, *unheimlich*."[5] Under this consideration, the "uncanny" is not concealed as the opposite of the homely, but rather as the same within the "homely," as inherent in its meaning. The "unhomely" emerges within the "homely" as something familiar that has been once repressed.[6]

Addressing the Freudian theory of the "uncanny," and its location within the "homely," in describing the space in Franz Kafka's story, calls for the use of binary oppositional pairs, in-between which the oscillation of the "homely" can be explored. Thus, the space described within the text will be read through the application of the notion of the "homely" in a list of bi-polarities already identified within it (inside/outside, solid/void, artificial/natural, safe/dangerous, I/other) and the inversions that take place.

a poetics of "doing"

The *Bau*, in Kafka's short story, is constructed underneath the surface, as a self-enclosed void within the solid of the earth. The poetics circulate around the poetics of the border, the shaping and geometrizing of the solid ground as a spatial barrier between the inner void and the outer void. The entrance serves as an inverted architectural signifier of the border, and thus of the *Bau* as well. It is structured as an apparatus that consists of an opening bearing the geometry

of the entrance but denying its functionality, as it leads to a dead end, and an opening covered with moss functioning as the actual entrance but denying the geometry that signifies its functionality. The entrance signifier, spatially analyzed to its components, succeeds in deferring meaning contribution and, thus, generates a deceiving apparatus, a trap, turned initially toward the possible invader. However, it is by this exact entrance typology that we become aware of the identity of the space constructed through the fundamental gesture of exclusion and enchantment. This mechanism indicates more than the entrance, the gate; it indicates the existence of a place to enter, it betrays the *Bau*, and the creature acknowledges that. He is already entrapped within this duplicated inverse entrance, for the *Bau* will never be safe enough.

The construction is based on a general plan conducted by the creature. It consists of two systematized networks: one of linear voids that serve as passages and one of receptacles of spatial voids, generated in the intersection of the linear voids. The tissue of the passages expands and generates more void in the inside; when approaching the entrance/exit of the structure, the network is transformed into a labyrinth structure.

> *It is always with a certain solemnity that I approach the exit again... it is no easy job to wander about there, for I have contrived there a whole little maze of passages; it was there that I began my burrow, at a time when I had hope of ever completing it according to my plans; ...here is my main entrance, I said in those days, ironically addressing my invisible enemies and seeing them all already caught and stifled in the outer labyrinth...* [7]

By doubling and multiplying the linear voids of the passages, space and time intervening between the entrance/exit and the center, the inside and the outside of the *Bau*, are distended. Space unfolds within the labyrinth so as to contain motion and time. The space of the *Bau* is controlled, delineated and split up by the ceremonial model of entering the edifice, imposed by the maze. The labyrinth, being the first construction of the *Bau* following the construction of the entrance, is impregnated with the mission of controlling the construction. The labyrinth stands as the protagonist's disembodied eye that surveys and punishes every breaking of the border. It is structured as a trap that could capture even its own architect/builder.

While motion is addressed and controlled by numerous passages, poses are hosted by cells. They are dilated rounded void spaces generated along pre-decided points on the line of the passages and organized in a hierarchal order. These cells[8] are essential to the establishment of the notion of the "homely" within the Bau. They are the representational places of the architect's/protagonist's identity that protect him against the undesirable "other."

Among them, the Castle Keep serves as the ultimate shelter, and thus, is the most precious part of the *Bau*.[9] It is a round vaulted space pierced by the linear voids of ten passages. It is the core cell of his construction, the spatial matrix of the *Bau*. The whole spatial structure serves as an apparatus that provisions the Castle Keep and simultaneously the 'Castle Keep' functions as the spatial womb that generates the whole structure of surveillance, necessary for its existence. It functions as a geometrical inversion of Bentham's "Panopticon;" the omnipotent gaze of the creature/architect situated in the middle of the central void is a gaze turned towards him.

the emergence of the "uncanny"

Throughout the short story, and before the "uncanny" emerges, it is presented as the space where the creature finds itself better oriented and safer. This is precisely the place where the "other" is least expected. However, "the better orientated in his environment a person is, the less readily will he get the impression of something uncanny in regard to the objects and events in it,"[10] as Freud mentions in his unfolding of the "uncanny." So this is exactly the moment and the place for the emergence of the "uncanny," the moment the creature enjoys the "homeliness" of his Castle Keep.

> *This had to happen just in my favorite room, I think to myself, and I walk a fair good distance away from it, almost halfway along the passage leading to the next room; but I do this merely as a joke, pretending to myself that my favorite room is not alone to blame, but that there are disturbances elsewhere as well, and with a smile on my face I begin to listen; but soon I stop smiling, for, right enough, the same whistling meets me here too.*[11]

It is this spatial matrix that gives birth to the "uncanny" within the "homely," to the unfamiliar within the familiar. The dangerous "other" originally repressed and expelled from

the homely environment of the spatial matrix/womb, now returns and demonstrates its existence through the whistling. The "uncanny" effect is generated by the manifestation of the repressed wish that "ought to have remained hidden and secret."[12] Yet, the question remains open; what is the creature's repressed wish that is now exposed?

The network of the passages, along with the numerous cavities/cells, the openings of the entrance and the Castle Keep are organized and structured as the organs of the body the creature inhabits. More than that, the construction per se is impregnated with the corporeal struggle between the solid body of the ground and the creature's body that stops temporarily only when the body of the architect/creature bleeds: the hands for subtracting material and its forehead for hardening the soft surface of the ground. Within each celebration over the completion of every task of the *Bau* project, we become aware of a loss; a loss that is experienced by the body of the architect, a loss damaging the tool of his architecture. The *Bau* bears as imprints all these temporal losses through the creature's effort to structure the spatial body that will include and shelter his own body.

The creature's desire to construct and inhabit within this impenetrable "secure" body can be interpreted as the Freudian "infantile wish;" the wish to return to a pre-separation/pre-birth condition and to re-inhabit the womb from which he was initially excluded. The construction of the *Bau* circulated around this "infantile wish"[13] that is never consciously stated and remains repressed. The "uncanny" will emerge in the form of the whistle underlining the return and demonstration of the repressed, of the protagonist's "infantile wish."

a poetics of correction

One could claim that the "uncanny" results in the coincidence of the *Bau*, once constructed as the "womb," to its opposite, generating a poetics of correction. The place of refuge and life becomes the source of danger and death. Danger and otherness are inscribed as new kinds of *schemata* within the spatial matrix, the Castle Keep.

The signified and the meaning invested in every single spatial/architectural element will now concur with its opposite.

> *A complete reversal of things in the burrow; what was once the place of danger has become a place of tranquility [entrance], while the Castle Keep has been plunged into the melee of the world and all its perils. Still worse, even here there is no peace in reality, here nothing has changed; silent or vociferous, danger lies in ambush as before above the moss...*[14]

The entrance is now the place of tranquility because it is perceived as an exit; an exit that will relieve the creature from anxiety. The outer labyrinth that was constructed as a trap for the potential invader is now turned against its dweller. The creature is now located and controlled by the surveillance apparatus of the *Bau* that he has designed. The protagonist is now the "other" that has burst into the *Bau*. It was only after its separation from the edifice and returning to it that the whistle appeared as a manifestation of him being completely separated from his creation. This displacement from inside to outside resulted in the protagonist's alienation; an alienation that situates him as the invader, as the dangerous "other" within his own home.

This praxis of inversion and inscription of the unhomely/"uncanny"/unfamiliar within the homely/familiar generates a poetics of correction as a last effort to spatially repress the emerging. The poetics of spatial correction that is activated with the localization of the whistling, and unfolds henceforth, is mostly focused on the entrance and the Castle Keep.

> *One of these favorite plans of mine was to isolate the Castle Keep from its surroundings, that is to say, to restrict the thickness of its walls to about my own height, and leave a free space of about the same width all around the Castle Keep, except from a narrow foundation, which unfortunately would have to be left to bear up the whole. I had always pictured this free space, and not without reason, as the loveliest imaginable haunt... Then there would be no noise in the walls... the murmurous silence of the Castle Keep.*[15]

In the spatial proposal conducted for the protection of the Castle Keep, the process of differentiation of the spatial matrix from the *Bau* environment is addressed through the intervention of a ring of void. This in-between space is described as the "loveliest imaginable haunt" precisely because it stands in the in-between of homely/unhomely, identity/otherness, void/solid, where the oscillation between the binary poles will take place until their coincidence with their opposite. This "narrow foundation" becomes the border that divides and unifies, bears the imprint of difference and generates the ambivalence. The "uncanny" feeling will emerge outside the in-between space and this is why the haunt occupying the ring of void is so openly accepted as such.

With this spatial proposal of "an architecture of our minds,"[16] Kafka actually de-stabilizes and de-articulates the notion of the "home." *The metaphora* of the notion of the "ultimate shelter" into space elicits the construction of a place where meaning would be deferred. It is a place in-between the binary poles of homely/unhomely, outside/inside, solid/void and so on.

In Franz Kafka's short story, "home" is not the "ultimate shelter." Even if it is experienced as such from time to time, the coincidence of the place of refuge with the site of danger, and thus of the "unhomely" with the "homely," is inevitable. To be more precise, the construction of the spatial identity of the "home" encompasses its spatial otherness. Franz Kafka, as the author of the story, is aware of this inherent characteristic of the "home." It might be that the creature's "infantile wish" is a projection of its author's wish; "hesitation before birth... my life is a hesitation before birth,"[17] he admits in his diaries.

Sigmund Freud associates the return of what was once repressed with the experience of the "uncanny" feeling. The subject is too familiar with the one that once was repressed. What was repressed by Kafka was an "infantile wish," similar to his protagonist's wish, to retain a pre-birth state. The "uncanny" haunting in his short story is the revelation of its author's repressed wish through the creature's "uncanny" experience and its anxiety of exiting the *Bau*, as exiting the pre-birth condition of homeostasis.

The creature in the *Bau* will be traumatized by space per se. The apparatus of control and surveillance that he has constructed turns towards its architect, revealing the once repressed, the trauma. The creature with the traumatized ego is now the "other" to be tamed within the interior of the "shelter" that he has set; the protagonist is the one to undergo what Mark Wigley names the violence imposed by the domestic.[18]

For "home" could only exist in "an architecture of our mind." It constantly eludes our efforts to capture it and realize it in spatial terms. What is implied by Franz Kafka's short story is that, furthermore, even in the architecture of our minds, "home" will always bear its opposite and so it can never be homely enough. Or even further, it is exactly because of the excessive "homely" that inhabits and structures it, that home will never be experienced as such, and thus as a less-than-"home"/more-than-shelter.

endnotes

1 Jenny Edkins, *Trauma and the Memory of Politics* (Cambridge: Cambridge University Press, 2003), 4.

2 Although Franz Kafka asked his last lover, Dora Dymant, to destroy all his incomplete works after his death, a big part of this short story was preserved and found later by his friend and editor Max Brod. The original title of the short story, contributed by the editor and not by Kafka per se, is *Der Bau* in the German language For the accuracy of the text I will use the original word *Bau* when describing the burrow, in order to imply the underground construction.

3 Franz Kafka, "The Burrow," in *The Great Wall of China; Stories and Reflections*, trans. Willa Muir and Edwin Muir (New York: Schocken Books, 1960, c.1949), 79

4 The "uncanny" will be used from now on as the translation of *unheimlich*, as it has been translated under the supervision of Joan Riviera in the publication of Freud's essay: Sigmund Freud, "The 'uncanny'" in Benjamin Nelson (ed.) *On Creativity and the Unconscious, Papers on the Psychology of Art, Literature, Love, Religion by Sigmund Freud*, trans. Joan Riviera (New York: Harper & Row, 1958)

5 Freud, 131.

6 Ibid , 123, 148

7 Kafka, "The Burrow", 92.

8 The word used originally in the short story is *Platz*, while the corresponding word in the English translation is "cell". Even though, the correct translation should be "square", in order to accentuate the encompassing environment of the *Platz* and its geometry as a spatial receptacle, I will use the word used in the English translation.

9 In the original German text the word that is used as the name of the "Castle Keep" is *Burgplatz*. Even though the construction is not elevated, but "buried" underneath earth, I will use the English translation of the *Burgplatz*.

10 Freud, 124

11 Kafka, 118.

12 Freud, 130.

13 Ibid., 140, 152-53.
One of the examples that Sigmund Freud uses as a manifestation of the "uncanny" is the *unheimlich* impression that is generated to some of his patients by the sight of the woman's genitals. According to him "this *unheimlich* place, however, is the entrance to the former *Heim* (home) of all human beings, to the place where everyone dwelt once upon a time and in the beginning... In this case, too, the *unheimlich* is what once was *heimlich*, home-like, familiar; the prefix "un" is the token of repression." The repressed wish that Freud does not mention directly in his analysis, but however implies it in his description, is the "infantile wish," the wish of returning to the womb.

14 Kafka, 134

15 Ibid., 121-22.

16 The phrase is borrowed by the title of the below mentioned collection of essays: Alexander Kostka and Irving Wohlfarth (eds.), *Nietzsche and "on architecture of our mind"* (Los Angeles: Getty Research Institute for the History of Art and the Humanities, 1999).

17 Franz Kafka, *The Diaries of Franz Kafka: 1913-1923*, vol. 2, ed. Max Brod (New York: Schocken Books, 1949), 210.

18 Mark Wigley, *The Architecture of Deconstruction. Derrida's Haunt* (Cambridge: MIT Press, 1993), 119-121.

The shower on the Mir space station.

Susmita Mohanty, Barbara Imhof

Microcosmic Getaways Aboard Space Habitats

1.0 Long Term Habitation in [Outer] Space

Long duration space missions require crews to live in isolation and confinement for several months at a time. Some Russian cosmonauts have even spent a year or more aboard the Mir space station. The crews live in cramped conditions, away from family and friends, away from easy physical access to the outdoors, away from the comforts of local cultural anchors, away from the plethora of sensory stimuli that they are accustomed to on Earth.

> *"We are tired of each other cramped in here in this small station."*- Valentin Lebedev, Cosmonaut, Salyut 7[1]

The Russians have identified three phases in adaptation to space. The first lasts up to two months and is dominated by adjustments to the new environment. This is followed by increasing fatigue and decreasing motivation, "asthenia." What once seemed exciting becomes boring and repetitious. Next comes a lengthy period during which the asthenia, which can include depression and anxiety, worsens.[2]

The space habitats that astronauts live in are a homogenized composite of cylindrical pressurized metal tubes with cramped machine-like interiors. Here, they spend their time performing prescribed mission tasks, routine chores, and tackling occasional emergencies. Some missions are so packed that the astronauts don't have enough time to eat, exercise, or sleep. Over-tasking and lack of sleep led to a strike in space when the third crew of the Skylab[3] space station turned off the radio and refused to talk with Houston Mission Control. NASA Ground Control eventually eased off on their workload and the astronauts returned to work. There are anecdotal references on the Russian side as well, all pointing to the fact that space workers are not superhuman, and have to deal with problems, which become more pronounced as mission duration increases.

> *"The problems arise after the initial shock and awe of the environment wear off, and the crew members get to know their surroundings a little better. Then they begin to rebel against authority and each other."* – Dr. John Annexstad, Space Scientist, 10-time veteran of scientific Antarctic missions[4]

In the future, the journeys will get more daunting. Humans will journey to Mars, a journey that will last almost two and

(left) Astronaut Terrence W. Wilcutt traverses into Russia's Mir Space Station Kristall Module toting a water bag from the Space Shuttle Atlantis to be used on Mir. (right) Cosmonaut Salizhan S. Sharipov, Expedition 10 flight engineer representing Russia's Federal Space Agency, works with the Russian Orlan Interface Unit in the Pirs Docking Compartment of the International Space Station (ISS).

a half years including six months in transit each way and five hundred days of stay on the planet. On such an arduous journey, the stakes will be much higher. One needs to prepare for all kinds of scenarios that a micro-society of up to six crew members might have to face on their Martian journey: sensory deprivation, monotony, depression, work overload, interpersonal conflict, mishaps, and more.

> *"The ability to put [Mars mission] astronauts on the couch and help them through difficulties is going to be limited."* – Dr. Al Holland, Psychologist, NASA Johnson Space Center[5]

Under these circumstances, it is important that the crew has either by design, or they improvise, imagine, invent, or discover individual or collective "microcosmic getaways" aboard their space habitats. These getaways could be stimulus spaces (real or virtual), artifacts, or even imaginary worlds – those that lead to a positive physiological or psychological activity or response.

2.0 Getaways Are Extreme Environment Countermeasures

Getaways can play a vital role in enhancing the socio-psychological health of the crew, thus improve the quality of life aboard space habitats and ensure mission success. Getaways can serve as effective countermeasures to a plethora of human factor issues that can crop up in the extreme environment of outer space. The schematic gives an overview of the wide array of human factor issues that need to be addressed on long duration mission.

ISS Cupola

Human Factors

↓

Psychological

<Territoriality><Withdrawal><Privacy><Depression>
<Anxiety><Anger><Hostility<Fear><Ego><Homesickness>
<Demotivation><Loneliness>

↓

Social

<Privacy><Conflict><Love><Sex><Groupism><Cohesion>
<Tension><Competition><Aggression><Rebellion>
<Disagreements><Family Emergencies><Leisure><Culture>

↓

Sensory

<Visual><Tactile><Auditory><Olfactory><Gustatory>
<Cognition><Real/Virtual>

↓

Spatial

<Cramped Volumes><Linear Configurations>
<Interiors><Outfitting><Movement><Orientation>
<Outdoor Access><Windows/Windowlessness>
<Technologized Spaces>

↓

Work-Related

<Overload><Not Enough Work><Scheduling>
<Fatigue><Monotony><Boredom><Not Enough Time for
Real Science><Not Enough Time for Exploration>
<Emergencies><Team Dynamics>

↓

Habitation-Related

<Illumination><Temperature><Noise><Ddor>
<Air/Water Quality><Food><Sleep><Health>
<Hygiene><Exercise>

Schematic giving an overview of a diverse and complex array of human factor issues that getaways can help counter.

In the sections that follow, the authors take the reader on a metaphorical walk through space habitats part real, part utopian in search of microcosmic getaways. The real habitats are the former Russian station Mir and the current International Space Station (ISS) Alpha. The utopian habitats are experimental concepts that break the 'man-in-a-can' paradigm of space architecture practiced at governmental space agencies.

3.0 Getaways on Mir and Alpha

The authors have worked on design projects related to the Space Shuttle, the former Russian space station Mir, and the current International Space Station (ISS) Alpha. In this section they present a diverse selection of getaways from Mir and Alpha:

A *sauna* on Mir
A *tearoom* on Kibo
A *cupola* on the Alpha
A *floating* sculpture on Mir

A *sauna* on Mir

Mohanty[6] worked on a project to generate design concepts for whole body cleansing systems for the ISS. In her analysis of the use of an earth-type shower in space, she reviewed the showers used on Skylab and Mir. She reported that the use of a shower in microgravity was cumbersome. Although the actual showering takes just a few minutes, (1) the wait before the shower for the water to heat was too long, and (2) it took almost twenty minutes to clean the enclosure afterwards leaving the astronaut cold, thereby taking away the pleasure of a warm shower.

To offset these problems with the shower on Mir, the Russian cosmonauts found a cultural solution. They improvised and started using the shower enclosure for an air shower (sauna) about once a week, with warm or hot air flow, followed by a rubdown with a moist towel. To use as a sauna, the fan and heater were turned on. Unlike the regular shower, this mode required no waiting for the water to heat, and there was less cleanup of the water afterward.[7]

Many cultures have their versions of the sweat bath, from the *Sauna* of the Finns, to the *Furo* of the Japanese, from the *Bonyo* of the Russians to the *Hamam* of the Turks. The culture of the sauna is one of getting away from the stresses of daily life, and escaping to a world where an unhurried attitude is embraced as being essential for quality of life. It is a kind of "short term vacation spot" where you take refuge from all the hard work, relax, cleanse, converse, lounge with family and friends. It is a place for cleansing the body and the mind. In space, as on earth, a sauna can help maintain physiological and psychological well-being.

A *tearoom* on Kibo

The Japanese space agency (JAXA) plans to include a thirteen square foot tearoom in Japan's section of the ISS, the Kibo laboratory module. This is Japan's way of introducing an island of tranquility on the space station, a getaway from the rigor of daily life aboard the space station. A team of experts from the Tokyo National University of Fine Arts and Music helped with the design. The idea was to recreate a traditional tearoom while making creative use of 3-dimensional space in weightlessness.

The Japanese tea ceremony, *chanoyu*, has its origins in Zen Buddhism. Over centuries, this ritual developed into an art form. Sen Rikyú, its greatest exponent, established the principles of *wabi* (simplicity) and *sabi* (tranquility) that underpin the ceremony. He defined the details of etiquette, location, and equipment that reflect those principles. At its simplest, the tea ceremony is an aesthetic way to entertain guests, a meditative experience, a celebration of exquisiteness and delicacy of form. At its most complex, the ceremony is loaded with meaning. Practitioners see significance in every movement and utensil, even in the color of the hostess's kimono, the tatami mats on which the guests sit, the garden in which a teahouse stands, the teahouse itself, even the number of nails in the teahouse door.[8]

> *"Space travel is psychologically difficult so the idea is to provide a calm place where astronauts can relax. This should help them maintain good working relationships."*
> – Yoshihiro Nakamura, JAXA spokesperson[9]

A *cupola* on Alpha

The cupola is an Italian hardware contribution to the ISS. It is a pressurized space station element with seven windows that will provide visual access to the activities outside the station and give the inhabitants a portal for spectacular views of the Earth. From a technological perspective, it will be home to the command and control workstations to assist in Space Station Remote Manipulator System or robotic arm manipulations, and Extra Vehicular Activities (EVA).

Symbolically, the cupola will be a 'window to the universe,' a cosmic vault, as is the case of the cupolas found in Italian church architecture. For the astronauts, it will be like a portal into the infinite expanse of the cosmos, a *verondoh*, a lookout, a private spot, a getaway.

A *floating sculpture* on Mir

The 'cosmic dancer' sculpture on Mir was a contribution by artist Arthur Woods. Woods chose green as the color for the

sculpture to provide contrast to the drab station interiors cluttered with equipment, tubes and cables as well as to induce psychologically calming effects due to its association with nature.

Prior to commencing to fly, I was interested in art and relaxed with it from my professional occupation. [In school] I played the bandoneon and clarinet... [In university] I played the saxophone. On board we have a keyboard, which was brought to us by Jean Luc Cretien. In our free time we sometimes play it.

But there are also moments, where for weeks I cannot even look out of the portal, as I am too busy carrying out operational and reparation works on the station. The station is over seven years old and needs special attention. And those are the days where, when having a free minute, it is comfortable to look at some art object, it being a picture or a sculpture like we have taken with us on board.

The form of the sculpture is original, angular and avant-garde, and inspires for diverse thoughts and fantasies. One can see in this figure any being one wants. Therefore it is interesting to enjoy looking at it and to hold it in one's hands. When holding it in one's hands, one caresses it and feels a cozy feeling, as if one would hold a living being. We think that such art works are not only important to the artists who send them into space but also for us cosmonauts who simply feel the presence of a little artwork as comfortable.

- 'Cosmic Dancer' Commentary, Cosmonaut Alexander Polischuk on Mir[10]

While playing with the 'cosmic dancer,' the cosmonauts could leave the 'real' environment they were in by creating a 'dynamic virtual space' initialized by the object. The weightless environment let the object 'dance,' thus creating a playful getaway, in which the cosmonauts could float and therefore have the possibilities of many different positions between the object and themselves.

4.0 Getaways on Utopian Outposts

In this section, the authors shift the spotlight to space art, architecture and design projects conducted outside the traditional realm of space agencies. They showcase getaways from futuristic, experimental, utopian concepts for orbital and extraterrestrial outposts, some of which they were instrumental in creating.

A *greenhouse* on KEPLER moon base
A *bar* on KOPERNIKUS lunar outpost
An *art studio* in space

A *greenhouse* on KEPLER moon base

The KEPLER Base was one of the utopian lunar base concepts generated during the Lunar Base Design Workshop led by Mohanty and Imhof. It was hosted at the European Space Agency and the Vienna University of Technology. The objective of this workshop was to generate new, bold, unorthodox architectural concepts for future space outposts.

The KEPLER Base was a proposed 'subterranean' live-work space on the Moon. One of the prominent features of this base was the greenhouse component. The base featured two centrally located, 400 sqm greenhouses as part of the closed-loop life support system.

As large parts of the crew's stay are spent underground, the designers of the base created a 'simulated outdoor'

Cosmonauts dressed for a space walk aboard Mir space station with the green 'cosmic dancer' sculpture floating in the foreground.

Side Elevation of the KEPLER Base, future lunar outpost proposed during the 2002 Lunar Base Design Workshop hosted at the European Space Agency

environment indoors using a prominent greenhouse and careful planning of movement within the base. In outer space, the need for humans to stay cooped up in pressurized interiors limits physical and visual access to the 'outdoors'. So the designers can facilitate the need to escape from the rigors of daily life on space outposts by designing a 'notion' of the outdoors indoors, by creating virtual getaways.[11]

A *bar* on KOPERNIKUS lunar outpost

Yet another utopian concept that emerged from the Lunar Base Design Workshop was a surface lunar outpost set in the year 2069 named KOPERNIKUS, with a mission to provide commercial services to the lunar communities in the vicinity.

These commercial services, included among others, a bar as a leisure activity engine where outpost crew and their neighbors from nearby lunar communities could converge for lounging, dancing, and partying. The bar could also serve as a space for hosting periodical events such as the one demonstrated by the hypothetical flyer of the 20th anniversary of the lunar surf-society.

The bar module on the top comprises a solid central module with inflatable parts on the sides that can hold up to thirty people and a bartending area, a lounging area as well as an air-cushioned dance floor.[12]

An *art studio* in space

The ISADORA Module is the name given by American-Brazilian designer Ricky Seabra to the project he has devised for artists to go into space. The aim is to give artists residencies on board a space station. About two thirds of the eight meter-long module would be a performance studio space; the remaining one-third would be a cozy cushion pit where artists and astronauts could gather to talk and relax.[13]

> *Isadora will be a vehicle to explore the poetic potential of space; an experience that will most certainly broaden and deepen our perception of the Universe, our Earth, and Ourselves.*
>
> – Ricky Seabra, Creator of the ISADORA concept

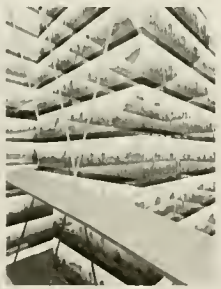
The idea of 'art in space' is not limited to the ISADORA. There have been several other ideas, including one from the Tate in London. In order to fulfill their mission to extend access to British and international modern and contemporary art, the Tate Trustees have determined that the next Tate site should be in space. In 2003, the 'Tate in Space' program invited three architecture firms to submit concepts for an art gallery in space. It also hosted a student competition around the same theme. The winning idea came from StudioCousins. Their idea is based on an undulating, dynamic gallery where art is viewed at the center of a spatially and temporally responsive space. Each of its twenty-four segments digitally records an hour in different locations around the globe.[14]

The visitors can float through the different segments and view the art in any orientation. The visitors can experience the Himalayas at dawn and the Amazon at dusk, one end of the gallery could be night and the other end could be day, depending on its location in orbit – or the segment can be transparent for viewing a particular Tate exhibition.

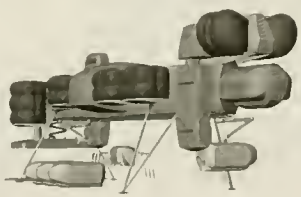
5.0 The Future: Microcosmic Getaways By Design

The walk through the real and utopian getaways in the above two sections demonstrate how and why getaways could potentially act as countermeasures to human factor challenges on space missions. An analysis of their respective effects is summarized here.

Computer renderings showing an extensive greenhouse on the KEPLER Base.



(below) 3-d computer model of KOPERNIKUS lunar outpost. (right) Alternate 3-d view of the outpost highlighting various parts of the outpost including the location of the bar.



	Psychological	Social	Sensory	Spatial	Work	Habitation
Sauna	⦸	⦸	⦸			⦸
Tearoom	⦸	⦸	⦸	⦸		
Cupola	⦸		⦸	⦸	⦸	⦸
Sculpture	⦸	⦸	⦸	⦸		
Greenhouse	⦸		⦸	⦸		⦸
Bar		⦸	⦸	⦸		
Art Studio	⦸	⦸	⦸	⦸		

Matrix showing the relation between the getaways and human factor issues they address

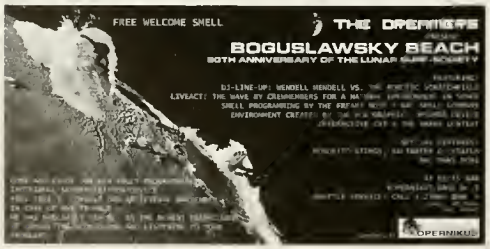
As is evident from the matrix above, the psychological, social, sensory and spatial implications of getaways can be substantial. The designers of future habitats need to take this into consideration. Further analysis of whether the getaways presented here, were created by design, improvisation, invention, imagination or discovery led to the following findings.

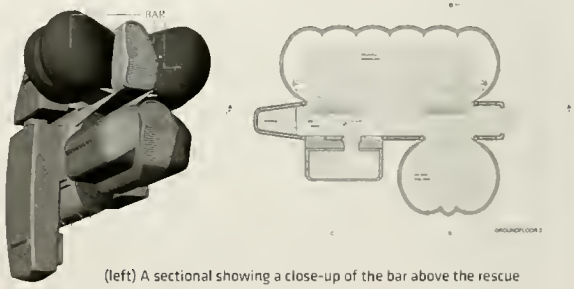
	By Design	Improvisation	Invention	Imagination	Discovery
Sauna		⦸			
Tearoom	⦸				
Cupola	⦸	⦸	⦸		
Sculpture	⦸			⦸	⦸
Greenhouse	⦸				⦸
Bar	⦸			⦸	
Art Studio	⦸		⦸	⦸	⦸

Matrix showing how the getaways were created

Most of the getaways discussed in this article were either created by design or by improvisation. The imagination and discovery components were also present. It is possible that on long missions, astronauts might invent their own getaways in transit or at their destination. The third and final analysis highlights whether the getaways were individual or collective. Most of the getaways were flexible and could be used either individually or by a group. Flexibility is an important design element for getaways.

An imaginary flyer for a lunar surf-society anniversary event at the KOPERNIKUS bar





(left) A sectional showing a close-up of the bar above the rescue module. (right) A sectional plan of the bar area on KOPERNIKUS.

	Sauna	Tearoom	Cupola	Sculpture	Greenhouse	Bar	Art Studio
Individual	☒		☒	☒	☒		☒
Collective	☒	☒	☒	☒	☒	☒	☒

Matrix showing whether the getaways can work for individuals or for groups.

The future lies in taking a multidisciplinary approach to the design of future habitats, rather than the engineering-dominated approach used by space agencies. It is also important to redefine 'the right stuff' which assumes astronauts to be superhuman and above socio-psychological problems. The success of future long duration missions will depend as much on the socio-psychological health of the crew as it will on technological capabilities.

The new generation of space architects, engineers and designers are taking the human enterprise of exploring space to a whole new realm. They seek a holistic human-centered approach. And they are not afraid to ask the question: why should we only take the scientific and technological aspects of our civilization when we go out and explore the cosmos, why shouldn't we also take with us our creative and cultural attributes as human beings?

The new genre in space architecture as illustrated here by the KEPLER Base, KOPERNIKUS outpost, ISADORA module and the Satellite Art Gallery, is in its early stages, but is all set to transform the reality of future space outposts. These stations of the future will incorporate 'microcosmic getaways' not by accident, but by design. And it is entirely possible that these getaways will, over time, include new and yet unknown experiences, and not just borrow from the portfolio of earthly experiences.

endnotes

1 Valentine Lebedev, *Diory of o Cosmonout 211 Doys in Spoce*, (Bantam, 1988), 300.

2 R. Persaud, "Mars: A big step for womankind?", Telegraph Article, www.telegraph.co.uk, Filed 21 January 2004 [online], accessed 03 June 2005.

3 American Space Station.

4 Persaud

5 Persaud

6 Co-author.

7 Susmita Mohanty, "Design Concepts for Zero-G Whole Body Cleansing on ISS Alpha" NASA/CR-2001-208931, 1997, 9-11.

8 http://www.twinings.com/en_int/world_of_tea/japan_cult.html, [online], accessed 03 June 2005.

9 M. Murphy, "Japan plans tearoom for the ISS," New Scientist Article, www.newscientist.com, Filed 20 February 2002. [online], accessed 03 June 2005.

10 www.cosmicdancer.com [online], accessed 03 June 2005.

11 Susmita Mohanty, Barbara Imhof, P.J van Susante, "European Lunar Base Concepts, 2003-01-2652, 33rd International Conference on Environmental Systems, 2003, 9-10.

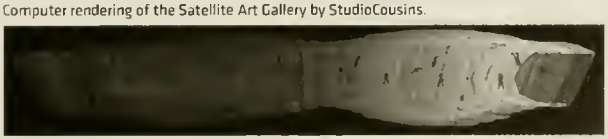
12 Mohanty, 2003.

13 Susmita Mohanty, Barbara Imhof, "Trans-Gravity: The Third Genre in Space Architecture", 2004-01-2370, 34th International Conference on Environmental Systems, 2004, 9.

14 http://www.tate.org.uk/space/studiocousins.htm [online], accessed 03 June 2005.

Dance experiments conducted by French dancer-choreographer Kitsou Dubois and troupe on a parabolic flight.

Computer rendering of the Satellite Art Gallery by StudioCousins.



Azra Akšamija

Nomadic Mosque

Wearable Prayer Space for Contemporary Islamic Practice in the West

The "Nomadic Mosque" project explores various ways of negotiating spatial relationships between Islamic traditions and modernity in the US and Western Europe. Through the design of wearable mosques, clothes that can be transformed into prayer-rugs, the project examines the notion of the mosque space and investigates its formal limits. Whereas it respects religious restrictions, the "Nomadic Mosque" aims to redefine traditional forms and functions of mosques in the contemporary context. Mosques built throughout history are only interpretations of the Prophet's original definition, which is conceptual. While the notion of origins continues to justify the very existence of any religion, with the passing of time each religion develops through its many different interpretations, all claiming universal truth. These thoughts thus contribute to an architectural interpretation of the religion of Islam, understanding it not as a static concept, which it often claims to be, but rather as a dynamic process that allows change in time and place.

The project reinterprets the concept of the "World as a Mosque," as defined by the Prophet Mohammed, as wearable architecture. The "Nomadic Mosque" can thus be seen as a minimal-volume mosque, whose design is based on individual needs and experiences of the worshipper. It is a device to transform any secular space into a prayer space. Not only does the wearable mosque accommodate the liturgical necessities, but it also acts as a prosthetic device of the worshipper communicating his/her prayers: problems, needs and desires. The project entails a catalogue of various designs for wearable mosques and a 10 min. video showing performative prayer acts in public space. The performance involved a collaboration with Muslim students at MIT, who informed the design and sewing of the individual mosques. Allowing for the new young Islamic community to speak out, the "Nomadic Mosque" becomes both a pro-vocative statement for religious revival and against prejudice. However, this statement is dependent on the process of wearing, which can only happen if Muslims themselves recognize the basic ideological elasticity of Islam, which allows for its own change and progress.

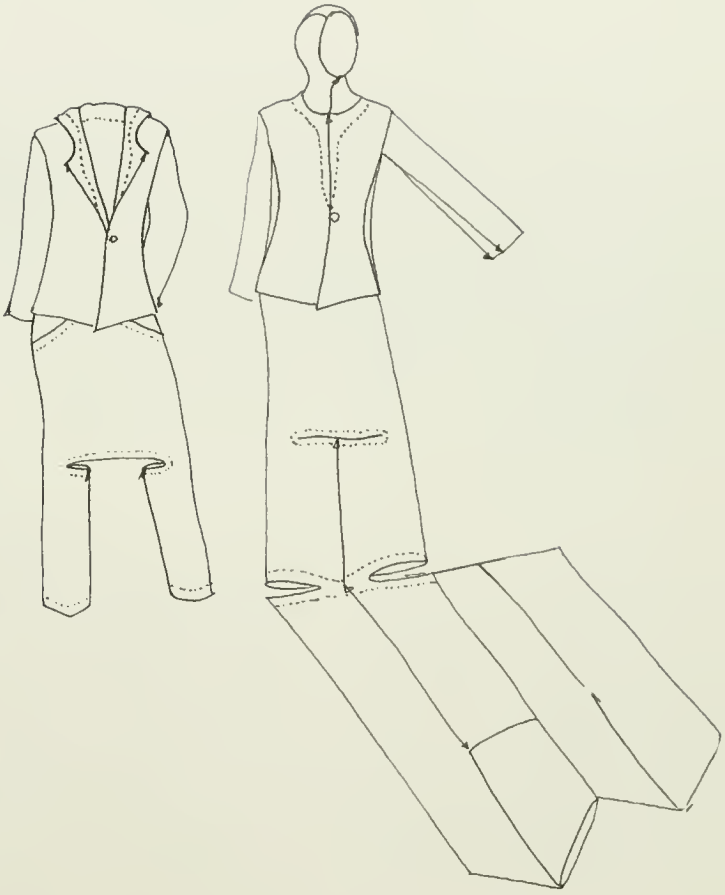


Photo: Jorg Mohr 2005 · *Lighting:* Martin Zoigner, Andreas Mayer, Reno Rieger
Studio and Equipment: Dopplinger Light & Grip Vienna www.dopplinger.com

Directed and edited by Azra Akšamija Camera: Andreas Mayer
Prayer participants: Abdurrahman O. Kandil, Mariam Kandil, Nadeem A Mazen, Anonymous participant at Revere Beach
Thanks to: Khadija Zinnenburg Carroll, Rahkeen Gray, Andreas Mayer, Kyong Park, Marjetica Potrč, Nasser Rabbat, Irvin C. Schick, Kryzstof Wodiczko, Interrogative Design Workshop, MIT Muslim Students Association

Ideas from nature?
Pic ideas
make more?
spins?

Marianthi Liapi and Susanne Seitinger

My Workshop

"Invention over Imitation, Fantasia over Mimesis, Narrative over Description."[1]

During open-ended play[2] children inhabit material and immaterial spaces with their bodies and minds. These spaces constitute children's wonder worlds, microcosms of play and exploration as well as retreats from the "out-of-scale" world of grown-ups. The following paper summarizes the theoretical underpinnings of a broader research project, titled *My Workshop*, which focuses on the spatial organization and the architectural support of such microcosms that nurture children's development.[3] Our proposal draws on two conceptual themes that should be considered when designing spaces for children. The first theme explores how bricolage and creative tinkering are integral to play worlds. The idea invokes the creative act of collecting and storing diverse objects and materials. It can be understood as a reflection of the technique for creating a *Wunderkammer* and engaging in imaginative explorations. The second theme addresses how "tactile intelligence" quite literally accompanies bricolage and should be encouraged in the activities of children. These two themes – tactility and bricolage – permeate our research and support the suggested recommendations on how carefully designed spatial configurations and carefully selected materials can broaden children's experiences in their personalized realms of experimentation.

When children play they occupy the central focal point, Husserl's *Nullpunkt*,[4] of their surrounding environment. They reign over this microcosm and fill it with diverse objects from explorations in and encounters with the adult macrocosm. Children's fascination with physical objects lies in their ability to trigger imaginary play-experiments and in their role as fragments from the world at large. These traces of experience and learning become valuable for children's developmental trajectory because the collection of objects stimulates both physically and mentally creative activities that unfold simultaneously on virtual, imaginary planes and in tangible, three-dimensional settings. Having a space for conceptualizing and manifesting ideas is crucial for children's development as it is for all creative endeavors:

> *Even the most abstract mind is affected by the surroundings of the body. No one is immune to the impressions that impinge on the senses from the outside. Creative individuals may seem to disregard their environment and work happily in even the most dismal surroundings... But in reality, the spatiotemporal context in which creative persons live has consequences that often go unnoticed.*[5]

The concept of "workshop" encapsulates the essence of a stimulating environment and serves as a metaphor for the physical space in which children can store the physical components of their microcosms as well as engage in the activities these objects inspire. Workshops in general are personal, customizable spaces that adapt readily to various project needs. They can support both individual- and group-work and they are a safe space for exploring tangents. As a result, our project employs the concept of *My Workshop*[6] and emphasizes its importance as a physical space that enables bricolage and unstructured playtime.[7]

My Workshop encases the personal space and the materials a child engages during play which together can be likened to the early modern *Wunderkammer* ("Chamber of Wonders"). *Wunderkammern* were considered microcosms of the universe as they contained natural and artificial wonders that stimulated their owners "to become performers

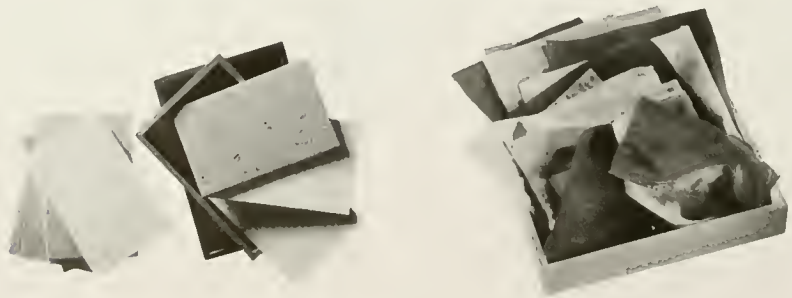
handling the props to better understand the world."[8] From this perspective, each child is a potential bricoleur. As a collector s/he assembles objects and raw materials for her/his own *Wunderkommer*-like space and classifies them in a spatially organized collection creating "a visionary prototype of future interconnective systems."[9] All the diverse artifacts of a bricoleur's collection are assembled and arranged with great care as part of "recognizable genres (...) linked by hidden assumptions and aims."[10] As in the case of the *Wunderkommer*, despite the variety of collectibles selected by the child, *My Workshop* flattens possible hierarchies allowing for individual rituals of cross-referencing and for meaningful narratives that are entirely personal and independent though perhaps related to extraneous orders.[11] *My Workshop* acts as a "performative device full of secrets and surprises"[12] comprised of an inventory of objects that not only reveals the owners' psyche but also allows the collector to develop make-believe scenarios through unlimited play sequences.

The process of selectively collecting, storing and retrieving components for building imaginary worlds captures the essence of the exploratory mode *My Workshop* seeks to encourage in children. This type of activity evokes the characteristics of bricolage, which are most apparent when the collector recognizes the inherent potential of an object for future imaginative explorations. Ready-made objects, malleable materials as well as computational materials are part of her/his repertoire and they are not necessarily collected to be reused in the same way they were initially intended. The bricoleur can diligently arrange and rearrange them within the spatial configuration that *My Workshop* offers, knowing every time the exact place where they are stored.

Bricoleurs move in and out of the space where they store their collection and experiment with their "precious" materials. In such creative endeavors, the workplace supports the overall goal. Artists, scientists, engineers and architects all rely on a repertoire of materials inside the protective shell of their workshop. In its capacity as a support for bricolage, *My Workshop* constitutes a platform for constructing micro-worlds whose vivid nature increases with the diversity and inherent potential of the materials they incorporate. Michael Eisenberg makes the case that more materials lead to richer micro-worlds as supported by construction-kit-like toys:

> *The main purpose of providing this list [of materials] is to suggest the ways in which the notion of a "micro-world" may be profitably rethought as a (...) partly tangible entity. (...) The argument here has focused on construction kits as the foundational "objects-to-think-with", as these provide plausible examples of children's artifacts that can be, at the same time, simple, self-contained in the choice of primitive pieces and means of combination, rich in content, connected with languages and symbolic notations, and suggestive of comfort.*[13]

Construction kits of that kind are powerful because they relate to the importance of tactile sensations in human experience. Research connecting the human senses, the hand[14] and emotional bonds formed with materials emphasizes the importance of touch. Diane Ackerman discusses the emotional depth people experience through touch and its role in supplementing the human visual capabilities. The ability of fingers to fully replace sight in systems like Braille further highlights the power of touch and consequently of the human hands.[15] When collecting objects for the *Wunderkommer*, the tactile power of the collector plays an important role in "activating" the treasured objects. "These cabinets encourage (...) the construction of personal order through withdrawal into the sensory pleasure of handling. Absorption in solid objects temporarily stills the flux of consciousness as the



Montessori school tools for enhancing tactile sensitivity.

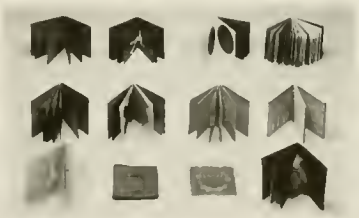
collector activates the collection by repeated handling (...)."[16] Undoubtedly touch is important for the collector, a fact that reinforces the need to provide as many developmental opportunities for the tactile sense as possible.

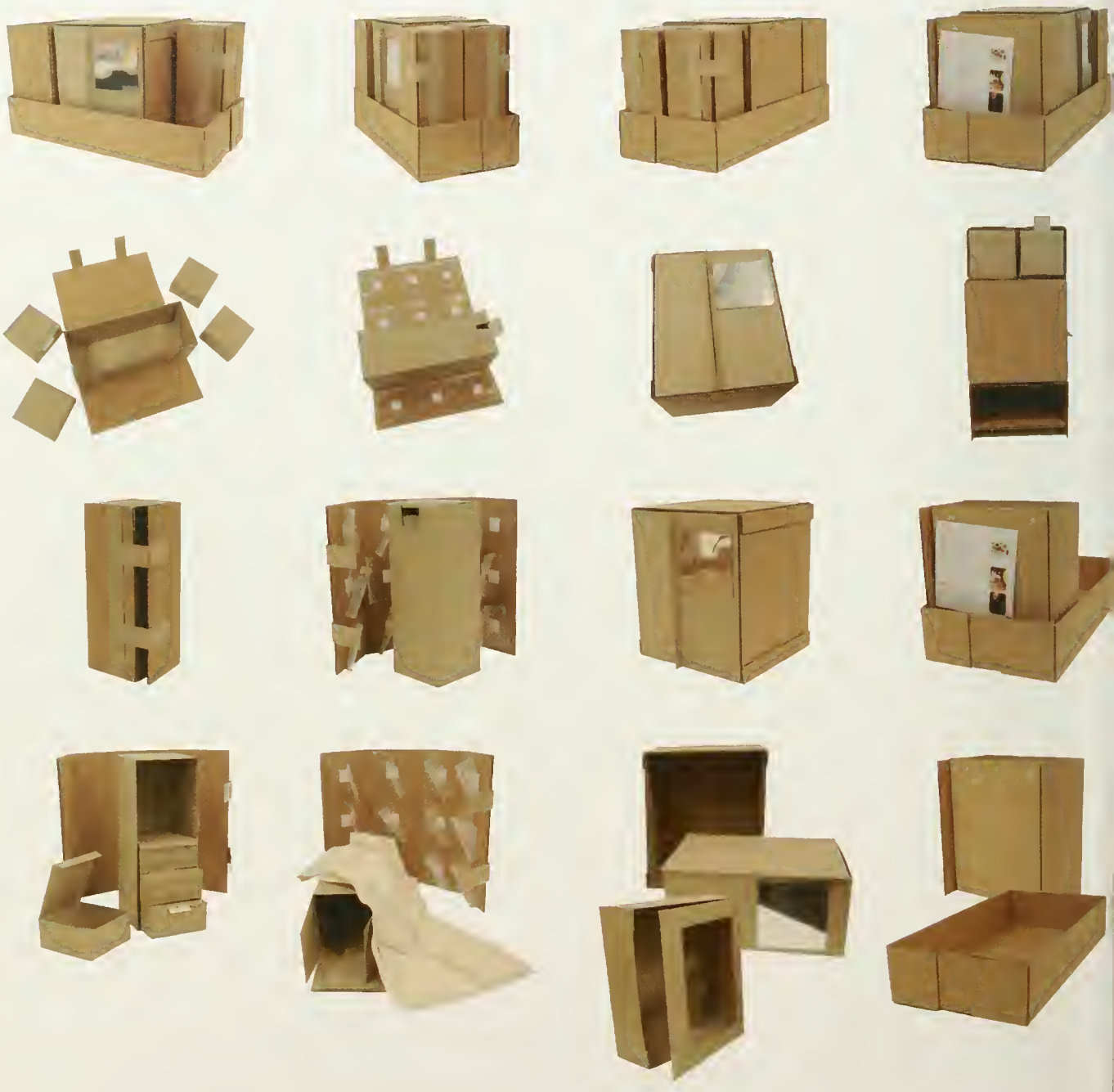
Even though children play with a variety of materials on a daily basis, their experiences, as those of grown-ups, are mediated by increasingly uniform and standardized surfaces. Research conducted by the Reggio Emilia Schools criticizes the relative homogeneity of many environments: "the coldness of metal, the linear cleanness of plastics and wood smoothed by machine precision, creating a material landscape in which contrasts are generally reduced or, at most, handled with difficulty."[17] Inspired by the Reggio Emilia Schools, our project supports the tactile experience as an important basis for the child's cognitive development.[18] Working on the same basis, Maria Montessori, the developer of the Montessori teaching method at the beginning of the 20th century, proposed tools for enhancing children's sense of touch.[19] Montessori tools imply the deep-seated nature of tactility, which Aristotle interpreted as an amalgamation of many senses.[20] Children, more than grown-ups, use their hands to gain these tactile experiences through sensory stimuli: "Children touch, caress, rub, and play; with one hand or two, with their fingertips, palm, the back of their hand, the knuckles, the edge."[21] *My Workshop* represents a child's place for creative exploration with diverse materials, hard or soft, flexible or rigid, transparent or opaque, computational or non-computational. The design proposal consists of a system of containers that encloses a dual system of storage and workspace. Four main components constitute our design proposal, each one having different subcomponents that can be used either independently or together. The child is presented with a system of boxes waiting to unfold their hidden spaces. Inspired by the very first definition of architectural space as a shelter for life, we create a variety of spaces by combining different packaging design techniques and materials. The containers can be deployed and utilized in many different ways depending on the problem at hand and the child's personal preferences. In other words, the design deliberately presents a generic typology. The system of boxes is not defined in terms of its exterior material in order to encourage customization on the part of the child through add-on layers of materials, colors, and other forms of notation. More specifically, the suggested system of containers fulfills the following guidelines:

- It is portable, lightweight and compact.
- It is made out of cardboard which is a cheap and readily available model-making material.
- It utilizes space in a creative way without imposing a singular use.
- The microcosm of the workshop space comes into being as the system of containers explodes into its sub-components.
- The containers differ in size and material, facilitating in that way customization of use.
- The assembly of the system encourages the user to develop her/his own organizational scheme.
- Each part of the system can be replaced individually.
- The system's design logic is evident and each part is easily reproducible.
- It is an evolving system designed to have an expandable scale that can follow the child's body scale as it grows up.
- Users can add new construction materials to their kits.
- Children can connect their workshops or parts of their workshops to immerse themselves in their explorations together.

Images of artists workshops in Ousseldorf, Germany

I PreLibri (The PreBooks), designed by Bruno Munari in 1979. Twelve books made of paper, cardboard, wood and other materials..





My Workshop prototype developed to encourage the bricolage of non-computational and computational material.

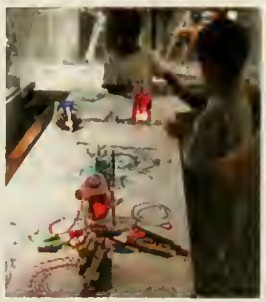
Prior to designing the containers, we analyzed existing construction kits. Most of them tout the child's potential to become an inventor and make almost anything. LEGO, for example, introduces its Inventor Kit by saying: "If you had the most amazing workshop of gadgets and gizmos you could imagine (...) then what would you make?"[22] However, the descriptions of the games included neglect the physical space of invention while none of the kits fully exploit the potential for the packaging to be a creative construction itself. A very characteristic example is the Playdoh Creativity Table, which is marketed as a place for creative activities: "The Playdoh Creativity Table is the ultimate all-in-one Playdoh play station. The huge workspace provides a place for lots of creative play with markers, crayons, and of course, Playdoh. Kids will enjoy endless fun in this contained play place, featuring (...) Playdoh favorites (...). This toy really gives Playdoh a home with lots of storage for tools and Playdoh cans in the table legs."[23] The vivid description of a "contained play place" approaches our idea of *My Workshop*; but it differs in essentials because it is product specific and thus cannot be customized or support other materials. Another example of a construction kit was developed at the MIT Media Lab and combines computational construction toys, called Crickets with non-computational everyday materials. Crickets have been used in group activities facilitated by the MIT Media Lab and the MIT Museum in after-school-programs and weekend workshops[24] and have yet to be available in kits like their predecessors, the programmable LEGO Mindstorms bricks.[25,26]

By proposing the idea of *My Workshop*, we wish to advance an ongoing conversation about shaping children's spaces for creative exploration. The proposed customizable spatial organization will allow children to adapt to their own style of bricolage. In the same system, materials perform an essential part as supportive and driving forces in all forms of play. The arrangement of the materials ultimately selected should lead to a multifarious mix of computational and non-computational elements that encourages children toward open-ended activities. *My Workshop* presents a pilot proposal that introduces spatial organization and tactility into discussions around children's imaginative playtime; but this suggestion merely represents the tip of the iceberg when we consider the contributions architectural design thinking can make towards strengthening the relationship between the micro-worlds in children's minds and the physical environment in which they play.

acknowledgements

We would like to thank all the people who assisted us with this project, especially Professor Mitchel Resnick, Director of the Lifelong Kindergarten Group at the MIT Media Lab, Stephanie Hunt, Research Associate in Emerging Technologies at the MIT Museum, and Edith Ackerman, Research Scientist at the MIT Media Lab.

The Cricket workshop organized by the MIT Media Lab and the MIT Museum provides activities that range from chain reaction contraptions to doodling devices. The left image shows a workshop for creating kinetic sculptures. The image at the right shows a workshop for creating doodling devices.



endnotes

1 Lorraine Daston and Katharine Park, *Wonders and the Order of Nature* (New York: Zone Books, 1998), 284

2 The term open-ended is used to describe an activity that is not constrained by definite limits. In this case, open-ended play encourages child development by relying more upon the child than the toy/game for learning. Constructivist theory posits that "children have an inner drive to build an understanding of their world as they explore and interact with materials. Concepts about how the world works are built gradually and become increasingly complex as the child enters a rich learning environment and exercises his or her freedom to play." During open-ended play the children are free to use their imagination to define a game scenario and apply their own unique play patterns, actions and details. http://dictionary.reference.com/search?q=open-ended, http://www.earlychildhood.com/Articles/index.cfm?A=626&FuseAction=Article, http://www.parentpages.net/arasmarttoys.shtml [online], accessed 07 June 2005.

3 The project was initially developed for the MIT Media Lab course titled "Technologies for Creative Learning" under Professor Mitchel Resnick during the fall semester of 2004. An extended version of this paper can be found at: http://www.mit.edu/~susannes/pdf_files/My_Workshop.pdf [online], accessed 07 June 2005.

4 According to Edmund Husserl the body is always the *Nullpunkt*, the zero point of space and therefore the necessary origin or source of all cognition. "Thanks to the body, I am the center of things, an *Ichzentrum* with a body unlike any other, a *Nullkorper*." Kari Jormakka, *Flying Dutchmen. Motion in Architecture* (Basel: Birkhauser, 2002), 76, and http://www.husserlpage.com/ [online], accessed 07 June 2005.

5 Mihalyi Csikszentmihalyi, *Creativity* (New York: Harper Collins, 1996) in Mitchel Resnick, Robbie Berg, Michael Eisenberg, "Beyond Black Boxes: Bringing Transparency and Aesthetics Back to Scientific Investigation," *Journal of Learning Sciences* (2000).

6 In the MIT Museum's Cricket database, the activities are announced as taking place in the "playshop." The MIT Invention Studio on November 3 and 17, 2001, for example, was introduced in the following way: "Inventors of all ages can come to this playshop to build, create, and discover in the MIT spirit. Design and construct contraptions using a variety of building materials, including motors, sensors, and programmable bricks called 'crickets,' invented right here at MIT." For details on workshops see http://learningtech.mit.edu/FX/index.php [online], accessed 07 June 2005.

7 Researchers from the University of Maryland identified the following five elements of play as the most potent ones to carry learning opportunities for children: pleasurable, with no extrinsic goals, spontaneous, encouraging active engagement and some make-believe. Kathy Hirsh-Pasek and Roberta Golinkoff, *Einstein Never Used Flash Cards* (USA: Rodale Press, 2003), 205-243.

8 Barbara Maria Stafford and Frances Terpak, *Devices of Wonder: from the World in a Box to Images on a Screen* (Los Angeles, CA: J. Paul Getty Museum, 2001), 6.

9 Stafford and Terpak, 3.

10 Daston and Park, 260-273.

11 Stafford and Terpak, 5-9

12 Stafford and Terpak, 12

13 Michael Eisenberg, "Mindstuff: Educational Technology Beyond the Computer," *Convergence* (2003), p. 17-18.

14 In his book *The Hand*, Frank Wilson provides a vivid description of the hand as a source of human development. "The handyman's hand was more than just an explorer and discoverer of things in the objective world, it was a divider, a joiner, an enumerator, dissector, and an assembler. The handyman's hand could be loving, aggressive, or playful. Eventually, it found in the intimate touch of grooming the secret to the power of healing. It may also have been the instigator of human language. (...) a new physics would eventually have to come into this brain, a new way of registering and representing the behavior of objects moving and changing under the control of the hand. It is precisely such a representational system – a syntax of cause and effect, of stories and of experiments, each having a beginning, a middle, and an end – that one finds at the deepest levels of the organization of human language." Frank R. Wilson, *The Hand: How Its Use Shapes the Brain, Language, and Human Culture* (New York: Pantheon Books, 1998), 59-60.

15 "Touch, by clarifying and adding to the shorthand of the eyes, teaches us that we live in a three-dimensional world. (...) Touch allows us to find our way in the world in the darkness or in other circumstances where we can't fully use our other senses. By combining eyesight and touch, primates excel at locating objects in space. Although there's no special name for the ability, we can touch something and decide if it's heavy, light, gaseous, soft, hard, liquid, solid." Diane Ackerman, *A Natural History of the Senses* (New York: Random House, 1990), 94

16 Stafford and Terpak, 9

17 The Reggio Emilia Schools in Italy are internationally acclaimed infant-toddler centers and preschools dedicated to building successful learning environments for children. Their research is specifically aimed at developing better physical spaces which they call "relational space" for children to flourish. G. Ceppi and M. Zini, eds., *Children, Spaces, Relations. Metaproject for an Environment for Young Children* (Milan: Reggio Children, 1998), 72.

18 "The richness of the sensory experience; investigation and discovery using your whole body. Sensory navigation that exalts the role of synesthesia in cognition and creation, fundamental to the knowledge-building processes and the formation of the personality. A complex environment made up of sensory contrasts and overlapping that are phenomenologically distinct: polysemy and balancing, negation of the patchwork effect or mélange, maintaining the perception of the differences between the parts." Ceppi and Zini, 16.

19 Thomas Muller and Romana Scheinder, *Montessori: Teaching Materials 1913-1935. Furniture and Architecture* (Prestel: Munich, 2002), 89-97.

20 "Aristotle himself doubted whether the sense of touch was a single sense or actually more than one, a sort of constellation of sense, giving it priority in the sensory hierarchy. According to the naturalist philosophers, in fact, a keen tactile sensitivity corresponded to a keener intelligence (...)." Ceppi and Zini, 72

21 Ceppi and Zini, 76.

22 LEGO Inventor. http://www.lego.com/eng/create/inventor/default.asp?x=x [online], accessed 07 June 2005.

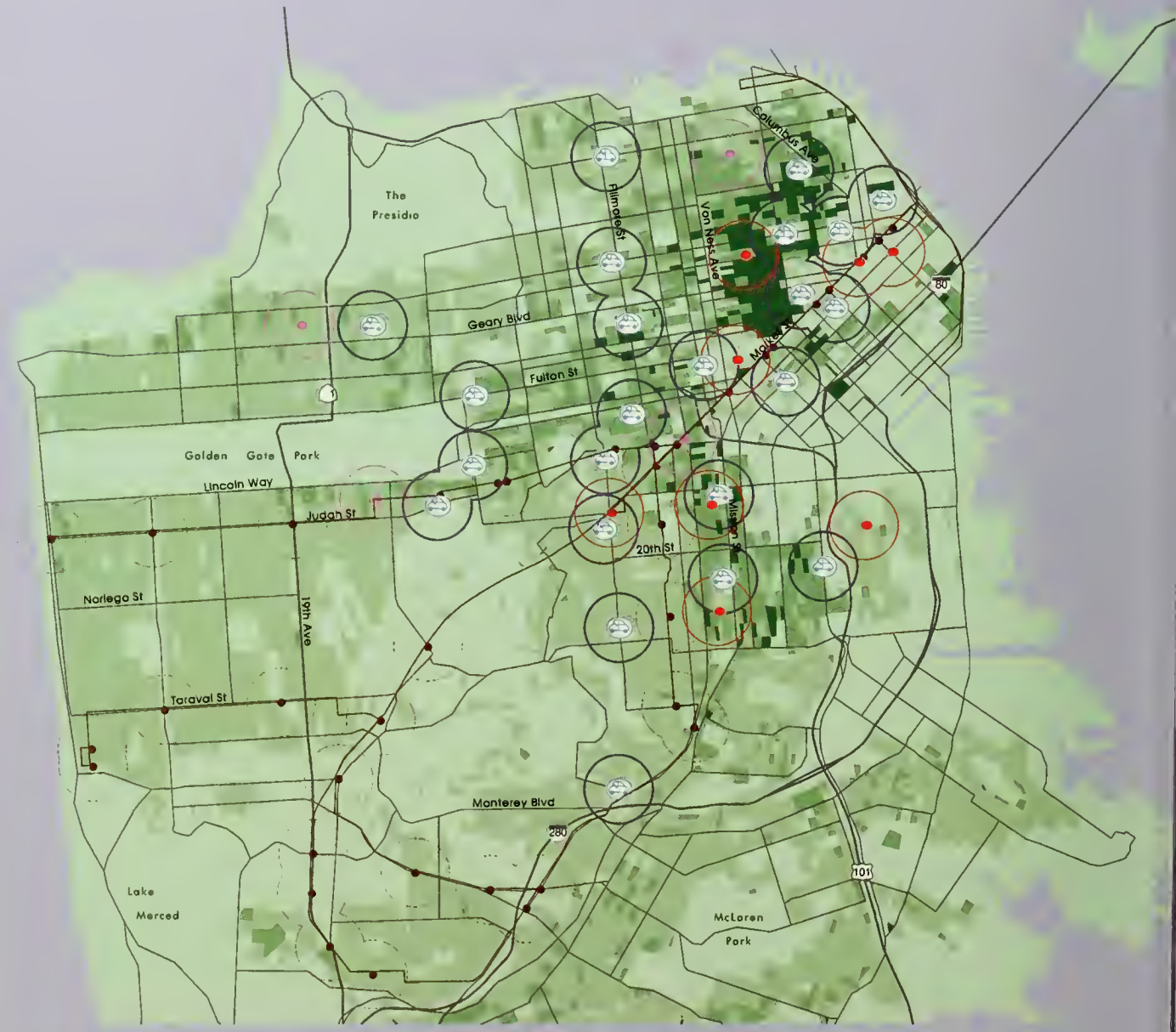
23 Play-Doh Creativity Table. http://www.yenra.com/play-doh/ [online], accessed 07 June 2005.

24 MIT Museum, Emerging Technology. http://web.mit.edu/museum and http://emergingtech.mit.edu [online], accessed 07 June 2005.

25 LEGO Mindstorms. http://mindstorms.lego.com/eng/default.asp?domainredir=www.legomindstorms.com [online], accessed 07 June 2005.

26 The following description shows how challenging it can be to provide the right mix of materials for successful Cricket workshops. "Of course, Crickets are only one component of the construction kits that we provide for the BBB [Beyond the Black Box] projects. Many BBB projects make use of LEGO materials (including not only the traditional building blocks but also gears, wheels, and motors) for building structures and mechanisms. We provide a variety of different sensors that enable users to monitor everything from temperature and light to heart rate and galvanic skin response. (...) When organizing BBB activities, we make sure to supply a wide range of arts-and-crafts materials, including everyday objects such as pipe cleaners, popsicle sticks, and cotton balls. This blend of high-tech devices and art supplies makes possible precise explorations and investigations while simultaneously fostering a spirit of creativity, exuberance, humor, stylishness,

and personal experience." Mitchel Resnick, Robbie Berg and Michael Eisenberg, "Beyond Black Boxes: Bringing Transparency and Aesthetics Back to Scientific Investigation," *Journal of Learning Sciences* (2000).



Population density and car pod distribution in San Francisco.

Daniel Barber

Is it Simple to be an Anti-humanist in Architecture?

In 1975, Louis Althusser delivered a lecture entitled "Is it Simple to be a Marxist in Philosophy?" in which he summarized his philosophical work from the early 60s. This work, he indicated, and specifically his proposal of anti-humanism, was written in reaction to the critique of totalitarian socialism that developed as news of Stalin's atrocities trickled into the West. Althusser had hoped to propose "a left-wing critique of Stalinism," distinct from the accommodations and compromises of the Communist Party, democratic socialists, labor groups, and their philosophical counterparts in existentialist, humanist, and Christian socialism.[1] The misdirected critique of Stalin performed by these groups, he claimed, was itself the result of a "bungled" interpretation of Marx: bungled because it didn't recognize the importance of the epistemological break from humanism and from the teleology of the dialectic in Marx's late work.[2] In emphasizing the importance of anti-humanism, Althusser hoped to articulate the lasting relevance, for philosophy, of the communist project: resistance to the determination of subjectivity through relations of exploitation. Recognition of the break of anti-humanism was a necessary intervention to productively re-conceive the goals of theory and practice in Althusser's historical conjuncture.[3]

In a similar fashion, the present essay articulates the continued relevance, for architecture, of the concept of anti-humanism – specifically as it relates to recent discussions of the diagram – and attempts to rescue these concepts from their "bungled" interpretations in architectural theory, from the 1970s to today. Current theorists proposing a 'post-critical architecture' refer to the concept of the diagram developed by Gilles Deleuze and Felix Guattari – the inheritors of Althusser's anti-humanist project[4] – to support their claim that contemporary architecture has somehow definitively surpassed the need for resistance.[5] I will show that the developments of anti-humanism, on the contrary, demonstrate a connection between immanence – as the constitution of power – and the diagram – as the organization of constitutive forces – that point towards possibilities for a reinvigorated, resistant political project in architecture. Such a project would forego both resistance as opposition (of the 'critical' theorists of the 70s and 80s) and the rejection of resistance *tout court* (of the 'post-critical' theorists of today) and favor, instead, the dispersal of resistant activities into the multiple components of fields and concerns that impact architecture's processes.

The concept of the diagram in the work of Deleuze and Guattari developed out of the theory of *immanent causality* that was central to Althusser's thesis of the anti-humanist 'break' in Marx's philosophy. The genealogy of the diagram, from Deleuze and Guattari, through Michel Foucault, and back to Althusser, is both an intellectual tradition and a theory of social change.[6] As the philosopher Jason Read has recently indicated:

> *Deleuze and Guattari's formulation regarding the immanence of desire to all social relations, or Foucault's assertion regarding the immanence of power to subjectivity and knowledge, can be understood not only as inheriting Althusser's intellectual legacy, but as inheriting the same problem: thinking resistance when... those last reservoirs of transcendence – nature and the unconscious – have been thoroughly commodified and exploited.*[7]

Althusser developed the concept of immanent causality as the ground for an ethics of non-oppositional resistance,

wherein power does not come from above, but is embedded, as Deleuze will later write, "within the very tissue" of the relations between individuals and between disciplinary fields.[8] Social conditions, immanent causality proposes, are produced in everyday practices, and resistance can occur within these practices. At stake in the interpretation of the diagram in architectural theory, then, is the relevance of the socio-political dimension of this intellectual genealogy to the theory and practice of 'diagrammatic architecture' as the instantiation of ethics in practices.

I Anti-humanism, in Althusser's words, was a "rejection of every theory that based history and politics on the essence of man;" it provided "the formation of history and politics based on radically new concepts: the concepts of social formation, productive forces, relations of production, superstructure, ideologies, determination in the last instance by the economy, etc."[9] The theory of anti-humanism sought to find in the late Marx a theory of causality – of the relationship between the individual and the mode of production – that exceeded the orthodox Marxist model. In orthodox Marxism, an economic mode of production ('the base') determines the cultural, political, and legal activities ('the superstructure') that condition individual experience. Althusser's innovation was to recognize that 'superstructural' activities are not organized as a hierarchy of levels autonomous from 'the base', but as a field of instances whose relationship to the mode of production is one of overdetermination: all instances are working in concert to produce the conditions of a given social formation, they are determined by it at the same time that they are determining it. "*The whole existence of the structure consists of its effects,*" Althusser wrote, "in short the structure, which is merely a specific combination of its peculiar elements, is nothing outside its effects;"[10] which, as Read indicates, is another way of saying that all effects are ultimately and at the same time causes.[11] The theory of immanent causality proposes that instances of cultural production have an effect on the mode of production because they are constantly constituting it.

Althusser further emphasizes that fields of activity maintain a semi-autonomous internal dynamic that allows them to establish their own rules, develop their own histories (though always, 'in the last instance,'[12] overdetermining the mode of production). Medicine, architecture, and computer science, for example, have their own distinct operations in the world: they operate as if they have a certain real independence, both from the determining conditions of the mode of production and from each other, but it is precisely through these semi-autonomous operations that they collectively overdetermine the mode of production. Althusser's reframing of causality allows agency for cultural practices while insisting that this agency is precisely what implicates such practices, 'in the last instance', in the maintenance of the economic system of relations and, thereby, of the political and cultural conditions for the development of subjectivity.

At issue for the relation of anti-humanism to architecture is the discussion how 'what we do' determines the specific limitations of the social conditions in which we live. In the 60s and 70s, immanent causality allowed for a new theory of the relationship between individual activity and the social formations (over)determined by the practices through which these activities are organized. The anti-humanist analysis of history as a "process without a subject" identified the impersonal forces that conflate, as Read has recently described it, "the most ephemeral and fleeting dimensions of existence, the desires and beliefs that constitute subjectivity," with "the material conditions of transformations in production."[13] On the one hand, the mode of production determines the development of subjectivity; on the other, social, economic, and political conditions are constantly constructed by individuals.[14] There is no base or superstructure, only practices.

II Althusser's work was introduced into architectural discussions in the early 70s, largely through the journal *Oppositions* of the influential Institute for Architecture and Urban Studies. In the minds of the emerging architectural avant-garde of this time period, the break from humanism was also a break from modernist functionalism, and therefore a momentous decoupling of formal design from an architecture of social utility.[15] Diana Agrest and Mario Gandelsonas' essay "Semiotics and Architecture: Ideological Consumption or Theoretical Work," published in the inaugural issue of *Oppositions* in 1973, was an early and important articulation of these ideas.[16] The article at once relies on Althusser's insistence that humanism is "the supreme ideology,"[17] and also reduces the rejection of humanism to a specific disciplinary agenda.

In their article, Agrest and Gandelsonas make the epistemological break of anti-humanism explicit for architecture: "the summation of Western architectural 'knowledge'

in its entire range," they write, "from commonplace intuition to sophisticated 'theories' and histories of architecture, is to be recognized as ideology rather than theory."[18] Such 'knowledge' and 'theory' is useless, according to the authors, for the purposes of developing new thinking about architecture because it is mired in assumptions of humanist teleology. The new architectural theory they propose emphasizes, following the anti-humanist break and the analysis of immanent causality, the contingent and socially constructed nature of architectural 'meaning'. Of specific importance, for Agrest and Gandelsonas, is the "arbitrary and socially constructed relationship"[19] of form to function; a relationship which much of the thinking on architectural modernism assumes as axiomatic. Agrest and Gandelsonas write:

> *to attribute a certain function to an architectural fact implies an underlying convention... [whereas] an architectural object is understood as such not because it has a certain inherent meaning which is 'natural' to it, but because meaning has been attributed to it as the result of cultural convention.*[20]

Peter Eisenman will elaborate upon and, to an extent, popularize this proposal in his editorial "Post-Functionalism" in *Oppositions* 6 (1976), placing the rejection of humanism squarely in the context of the negotiation of the functional legacy of architectural modernism:

> *Modernism, as a sensibility based on the fundamental displacement of man, represents what Michel Foucault would specify as a new episteme. Deriving from a non-humanistic attitude toward the relationship of an individual to his physical environment, it [modernism] breaks with the historical past, both with the ways of viewing man as a subject and, as we have said, with the ethical positivism of form and function. Thus, it [modernism, and modern architecture] can not be related to functionalism.*[21]

Rather than embedded in a relation to function or program, form, for Eisenman, is "understood as a series of fragments – signs without meaning dependent upon, and without reference to, a more basic condition."[22]

Anti-humanism, the radical theoretical notion which removes the human subject from the center of historical development, is engaged by architecture as a formal trope of dispersal and disjunction. As Eisenman proposes in his editorial and as he will reiterate throughout his influential career, the production of innovative form contains, in and of itself, all of the social, political, and economic agency available to the field. Anti-humanism, a theory of renewed possibilities for social resistance, was interpreted in architecture as a decoupling of its practices and processes from a functional relationship with social and technological change.[23] The axiom of formalism is as central to the 'critical' architecture of Eisenman in the 70s and 80s as it is to the 'post-critical' architecture of today; indeed it is this "bungled" interpretation of anti-humanism in the 1970s that informs much contemporary architectural theory.[24]

III It is a bit of a simplification, then, though not an unhelpful one, to indicate that the assumptions of humanism are also those of the humanities, and are the basis of conventional disciplinary knowledge: the boundaries between disciplinary and professional practices in today's culture are premised on the teleological progress of Man through the realization of his essence, on Man's relationship to nature, etc.[25] The theory of anti-humanism had specific implications for the relationship between disciplines and between professional fields; implications which architectural theorists chose not to emphasize. What Althusser proposed regarding humanism (in general) could be directed at the (specific) divisions of intellectual activity in the institutionalized human sciences:

> *[T]he scientific pretension of [the epistemological obstacles of humanism] resides in the presentation of them as something they cannot be: scientific concepts that allow us to pose and solve scientific problems in the open-ended field of scientific research, which produces discoveries.*[26]

The divisions of intellectual work facilitate the development of a specific type of disciplinary knowledge – in architecture as elsewhere – that is constituted by and constitutive of humanism. That which is considered real for the development of humanist disciplinary knowledge, including, if not especially, the organization and inter-relations of this knowledge, is, for anti-humanism, *arbitrary*.[27]

Foucault developed Althusser's insights and emphasized the importance of inter-relationships between fields. In particular, Foucault proposed the concept of *discursive practices* to analyze existing disciplinary boundaries in order, first, to destabilize the epistemological methods that derive from them and, second, to propose new

epistemological practices based on the focused re-orientation of these boundaries. "A discursive practice," Foucault wrote, "assembles a number of diverse disciplines or sciences or... crosses a certain number among them and regroups many of their individual characteristics into a new and occasionally unexpected unity."[28] Such practices operate without reference to transcendent cause; they are not understandable or representable in humanist frames of reference.[29] The analysis of the relationships between fields of knowledge also exposes the culturally constructed nature of the fields themselves.

Unlike humanist disciplines, discursive practices are mobile and constantly transforming, as Foucault indicates:

> *The transformation of a discursive practice is linked to a whole range of usually complex modifications that can occur outside its domain (in the forms of production, in social relationships, in political institutions), inside it (in its techniques for determining its objects, in the adjustment and refinement of its concepts, in its accumulation of facts), or to the side of it (in other discursive practices).*[30]

In this description, Althusser's semi-autonomy of fields is complicated by the productive possibilities of interactions between fields. Re-orienting disciplinary relationships, discursive practices use the knowledge developed in semi-autonomous fields for new and different purposes, 'piloting' this knowledge in new directions. Resistance, as counter-analysis or counter-history, develops *through* disciplinary knowledge but *as* the creative re-organization of that knowledge.

In Foucault's preface to the English translation of Deleuze and Guattari's *Anti-Oedipus*, the active political dimension of discursive practices is proposed concretely, and on the terms of social utility. Recognizing the potential to "make this great book into a manual or guide to everyday life,"[31] Foucault lists some of *Anti-Oedipus*' most important principles:

> *Develop action, thought, and desire by proliferation, juxtaposition, and disjunction, and not by subdivision and pyramidal hierarchization.... Prefer what is positive and multiple, difference over uniformity, flows over unities, mobile arrangements over productive systems. Believe that what is productive is not sedentary but nomadic ... Use political practice as an intensifier of thought, and analysis as a multiplier of the forms and domains for the intervention of political action.*[32]

Foucault recognized Deleuze and Guattari's emphasis on juxtaposition and disjunction, on the positive and the multiple, as an anti-humanist *ethics of practice*,[33] a recognition that conceiving history as a "process without a subject" allows one to see social formations as constituted within practices, and thus to see that individual activity, as social practices, produces the conditions of existence.

IV Deleuze and Guattari proposed the diagram as the figure of the organization of knowledge for action in the world of practices, as "the pilot of the abstract machine"[34] that instantiates power in material conditions and social formations. For Deleuze and Guattari, "there is a diagram whenever a single abstract machine functions directly in a matter;"[35] when there are political, cultural, and material stakes in the organization of social productivity; when an instance of cultural production, such as architecture, is invested in a result. The diagram draws relationships of forces but does not unify or stabilize them, rather, it guides their specific character in an active re-orientation; it organizes unformed potentialities into the real productive interactions that determine material conditions. "This has nothing to do either with a transcendent idea or with an ideological superstructure, or even with an economic infrastructure..." Deleuze wrote, "the diagram acts as a non-unifying immanent cause that is coextensive with the whole social field."[36]

This diagram is anti-disciplinary. If it "constructs a real that is yet to come, a new type of reality,"[37] it does so through the generation of unforeseen interactions between disparate fields of cultural, economic, and political analysis and production; if it is a "tool of the virtual,"[38] it is so, as Deleuze and Guattari have written, because it generates a "future form," a temporary organization of multiplicities as "resistance to the present" that, correlated through diagrammatic practice, has the potential to create "a new earth, a people that does not yet exist."[39] Other possible social formations, as Deleuze wrote, are present in a virtual state: "the relations between forces, or power relations, are merely virtual, potential, unstable, vanishing and molecular, and define only the possibilities of interaction;"[40] possibilities which are realized through practices.

Today the question of architecture's social efficacy can be engaged by proposing new relationships between fields, by producing instances of resistance to the status quo, and by producing new social formations through an ethics of anti-

disciplinary practice – not as revolutionary instigation, but as incremental organization of power, as counter-technology. Thus resistance is not the revolutionary overthrow of capitalism, but the constant possibility of forming and un-forming relationships between subjectivity and production. The concepts of anti-humanism, immanent causality, discursive practice, and the diagram produce an ethics that allows resistance to the present within everyday practices, including the practice of architecture.

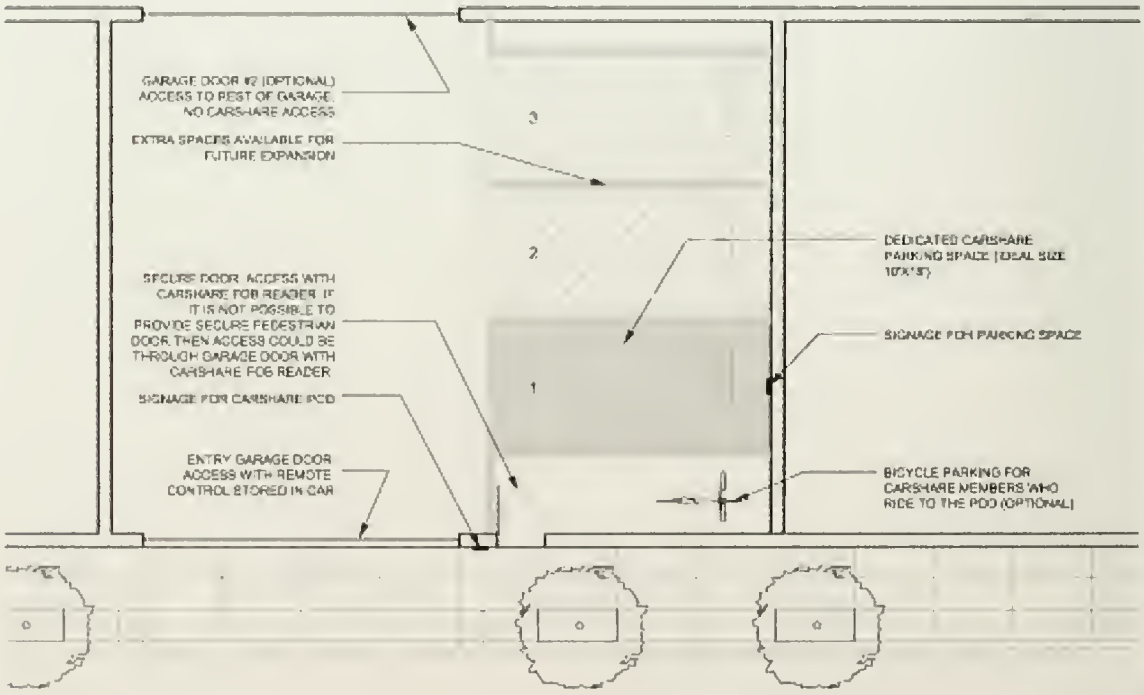
Emerging architectural discourses, such as the 'post-critical' and 'design intelligence', have not engaged the diagram in this context.[41] In the shadow of the autonomy thesis of architecture, and promoting their own disciplinary agenda, these recent theorists find in Deleuze and Guattari an explicit rejection of the possibility for a socially significant resistant framework for architecture. Against such claims, the genealogy outlined above describes a diagram which allows the discourse of architecture to re-consider its processes and practices on the terms of anti-humanist ethics, and thus towards a direct and active engagement with the economic, physical, and cultural conditions of contemporary life. In this sense, architecture is emblematic of the power-constitutive potential of practices; a diagrammatic architecture can participate in the integration of seemingly unrelated disciplines towards political, cultural, or environmental goals relative to the built environment, goals which can manifest resistance to dominant modes of behavior, expression, and form, as well as disrupt relationships between economies, demographies, and ecologies.

V This diagrammatic architecture is especially relevant to current debates regarding architecture and environmentalism. Concern with the environment in architectural discussions, however marginalized, is symptomatic of a larger concern with the organization of social forces towards a regenerative effect on nature and with a resistance to profit-driven economic priorities; social concern for 'the environment' is a desire for alternate social formations.[42] In any development project the exploitation of 'nature' is negotiated relative to the needs of investment capital. An anti-humanist architectural environmentalism would utilize the diagram to organize virtual relations between multiple fields, piloting them towards lessening environmental impacts in the construction, operation, and maintenance of a building, and thereby developing a strategy which can premiate other-than-capitalist priorities.[43] The potential for an anti-humanist environmentalism in architecture – a form of network thinking that allows for a more nuanced, tactical, and resolutely political engagement of forces across disciplinary fields – has yet to be adequately explored.[44]

The diagram has a potential utility in conceiving these practices: practices which exceed disciplinary boundaries to engage a specific material condition on the terms of the physical instantiation of social relations in built form. Diagrammatic practice demands site-specific integration of disparate forces and co-ordination of intentions; it demands that professional energies be directed towards determining how fields of analysis can productively interface in ways that are resistant to dominant social formations and to the exploitation of resources. Such practices respond to the specific conditions of a project rather than conform to a pre-existing model; they extract from these conditions the socially transformative goal most relevant to them. They are resistant to the concept of 'architecture' and open to its dissolution. Architecture is already dissolving into practices with disparate professional and social emphases, from product design to fabricating internet environments to urban planning. Diagrammatic practices propose that this dissolution be directed by an ethics of resistance to the present.

One example of a spatio-infrastuctural practice which reflects this theoretical orientation is the San Francisco-based organization *City CarShare*.[45] A non-profit company that maintains a number of vehicles around the city for the collective use of its members, *City CarShare* developed as the result of a multi-faceted analysis: an urban density analysis, which considered the settlement patterns of the Bay Area; a political analysis, which read various state-generated plans for growth; a transportation analysis, which explored the transportation options and needs of different groups of residents; a socio-cultural analysis, which analyzed the relation of car use to social structure; a psychological analysis, which assessed the development of individuals in a car-dominated condition; an economic analysis, which identified potential collaborations between transit agencies, developers, car manufacturers, and insurance providers; and a more finely-grained spatial analysis, which articulated the impact of redundant car ownership on public space.[46] All of these analyses articulated the benefit of part-time car ownership to individuals, to the city, and state-run transit agencies.

The questions for 'architecture': is there a material or spatial analysis to these practices that can be instantiated in individual buildings, individual lots, or on the design of their connections? What practices can architecture develop which exceed its disciplinary limitations? How can it productively engage the social, political, and environmental issues of material existence? The diagram, as conceived in the anti-humanist tradition, and as constitutive of new and unexpected practices, provides a framework for these investigations.



City Carshare pod installation diagram for architects locating pods in the parking lots of multi-family dwellings.

endnotes

1 See the account of Althusser's lecture in *Radical Philosophy* 12 (Winter 1975), 44

2 Louis Althusser, "Is it Simple to be a Marxist in Philosophy?" (1975), in *Philosophy and the Spontaneous Philosophy of the Scientists*, ed. Gregory Elliot, (New York: Verso, 1990), 208-210; see also Elliot's introduction, pxviii. Althusser first introduced the rupture from humanism as the crucial 'epistemological break' (a concept he took from Canguilhem and Bachelard) in his article "Marxism and Humanism" (1963, published in *Pour Marx* in 1965 [English translation 1969], and in *Reading Capital* (published in French in 1965 and in English in 1970). He was writing soon after a number of the earlier works of Marx, written under the humanist influences of Hegel and Feuerbach, were being discovered and published, especially the 1848 *Manuscripts*. At the time, Althusser's insistence on the scientific nature of the mature or late Marx of *Capital* re-invigorated Western Marxism: "For a whole generation of young intellectuals," Christine Buci-Glucksman wrote, mimicking his language, "Althusser represented a rupture and a historical opportunity" to re-think Marx in the contemporary context. The story of the development of the concept of anti-humanism is related by G.M. Goshgarian in his lengthy introduction to Louis Althusser, *The Humanist Controversy and Other Writings* (New York: Verso, 2003). See also François Dosse, *The History of Structuralism*, Volume 1 *The Rising Sign, 1945-1966* (Minneapolis: University of Minnesota Press, 1997); Perry Anderson, *Considerations on Western Marxism* (London: New Left Books, 1976). Althusser's influence was greatest in French, English, and American academia, where a huge body of self-consciously Althusserian texts emerged in the 70s, only to taper off at the end of the decade as criticism of his overly dogmatic division between 'science' and 'theory' began to emerge, and as the Marxist intellectual project began its slow demise. Much of this thinking, despite officially losing favor, was internalized in contemporary theoretical discourse. The architectural interpretations described in what follows are, in this sense, only one of many possible examples of attempts to engage these important, and at the time ridiculously popular, set of ideas

3 "We should," Althusser wrote in 1967, "in the strict sense, speak of Marx's *a-humonism*. The reason that I earlier [in "Marxism and Humanism" of 1963] used the phrase 'Marx's theoretical anti-humanism' was to emphasize the relentlessly polemical aspect of the break that Marx had to effect in order to think and articulate his discovery. It was also in order to indicate that this polemic is by no means behind us: we have to pursue, even today, in the face of the same ideological prejudices, the same *theoretical struggle*, with no hope of seeing it end anytime soon. We are not laboring under any illusions. theoretical humanism has a long and very 'bright future' ahead of it. We shall not have settled accounts with it by next spring..." See Louis Althusser, "The Humanist Controversy", in *The Humanist Controversy and Other Writings* (New York: Verso, 2004), 232-233

4 It is well known that Deleuze and Guattari reject the two most heralded notions of Althusser: his elaborate exploration of ideology and the notion of the strict 'scientific' nature of theory. This essay emphasizes the more basic connection of the general assumption of anti-humanism, and specifically the concept of immanent causality, that are important starting points for Deleuze and Guattari's work.

5 See Robert Somol and Sarah Whiting "Notes around the Doppler Effect and Other Moods of Modernism," in *Perspecta* 33: *Mining Autonomy* (2002), 75; and Michael Speaks, "Design Intelligence, Part 1: Introduction," in *A+U: architecture and urbanism* (December 2002), 17. See also George Baird, "'Criticality' and its Discontents," in *Harvard Design Magazine* 21 (Fall-Winter 2004), 16-21 for a description of the various players in the post-critical landscape. For a full consideration of the limited interpretation of the virtual in architecture, see my "Militant Architecture: Destabilizing Architecture's Disciplinarity," in *The Journal of Architecture* v10 n3 (July 2005), 245-254

6 For the biographical connections between these writers see Louis Althusser, *The Future Lasts Forever: A Memoir* (New York: The New Press, 1993); François Matheron "Introduction," in *Louis Althusser Early Writings: the Spectre of Hegel* (New York: Verso, 1997); Didier Eribon, *Michel Foucault* (Cambridge, MA: Harvard University Press, 1991); Gary Genosko, *Felix Guattari: An Aberrant Introduction* (New York: Continuum, 2002); Gilles Deleuze, "Jean Hyppolite's *Logic and Existence*," in *Desert Islands and other texts 1953-1974* (New York: Semiotexte, 2004), as well as Dosse's *History of Structuralism*, mentioned above

7 Jason Read, *The Micro-politics of Capital: Marx and the Pre-history of the Present* (Albany, NY: State University of New York Press, 2003), 11.

8 Gilles Deleuze, *Foucault* (Minneapolis, MN: University of Minnesota Press, 1988), 37.

9 Louis Althusser, "Marxism and Humanism" (1963) in *For Marx* (New York: Pantheon Books, 1969), 227.

10 Louis Althusser and Etienne Balibar, *Reading Capital* (New York: Pantheon Books, 1970), 189 (italics in original)

11 Read, *Micro-politics of Capital*, 9.

12 Althusser wrote "in the last instance" in quotes, in order to indicate that it is not a statement relative to temporality or sequence but, rather, that every instance was a determination, was the last instance. See Althusser, "Is it Simple?," especially the section "The 'Last Instance'...".

13 Read, *Micro-politics of Capital*, 11.

14 Relative to the post-critical use of the term 'sensibility' in describing the need for an emphasis, in architecture, on 'atmosphere,' 'ambience' and 'affect', it is important, in light of Read's investigations, to analyze the pervasive *politics of sensibility*: how do epistemological or experiential shifts ramify on political, economic, and ecological terms?

15 Eisenman had been developing an argument for "The Formal Basis of Modern Architecture" since writing his PhD thesis of that title in 1963. In an article of the same year, he proposed that by premiating form in an iterative design practice, he was able to absorb and resolve the complication produced by the other qualities he identified as inherent to architecture – "function, intent, structure, and technics" – and essentially establish the basis for the notion of 'formal autonomy' that still has currency in architecture today. See "Towards an Understanding of Form in Architecture" (1963), in *Eisenman Inside-Out: Selected Writings 1963-1988* (New Haven: Yale University Press, 2004).

16 Recently arrived from studies in semiotics in Paris and affiliated with the Tel Quel group, Agrest and Gandelsonas follow in what Annette Michelson has called "*Tel Quel*'s project: the political articulation of a theory of semiosis grounded in... Althusserian Marxism." See Annette Michelson, "The Agony of the French Left," in *October* vol. 6 (August, 1978), 18. Manfredo Tafuri was of course an important influence on the *Oppositions* group; his essay *Architecture and Utopia* was originally published in Italian as an article in *Contropiano* in 1969 and was widely read by the IAUS protagonists. See Manfredo Tafuri, *Architecture and Utopia* (Cambridge, MA: MIT Press, 1976). Tafuri visited the Institute in 1972, and wrote a number of articles for *Oppositions*. See Joan Ockman, "Venice and New York," in *Casabella* v 59, n.619-620 (Jan 1995), 56-73, for an insider's account of this connection. The argument could be made that he was also interpreted with the predetermined disciplinary agenda of formal autonomy. See, for example, Felicity Scott, "Architecture or Techno-Utopia," in *Grey Room* 03 (Spring 2001), 112-126.

17 Althusser, *The Humanist Controversy*, 275

18 Diana Agrest and Mario Gandelsonas, "Semiotics and Architecture: Ideological Consumption or Theoretical Work," in *Oppositions* 1 (1973), 94

19 Agrest and Gandelsonas, "Semiotics and Architecture," 95.

20 Ibid., 96.

21 Peter Eisenman, "Post-Functionalism," in *Oppositions* 6 (Fall 1976), ii.

22 Ibid., iii.

23 The mis-appropriation of anti-humanism in the 70s, and the roots of today's limited understandings, are more multi-faceted and complex than this brief essay can adequately identify. In addition to the complicated reception of Althusser,

there is the similarly complex reception of Tafuri and of Colin Rowe. Perhaps more important to consider are the 'non-architectural' issues that were impacting the conditions of the profession. As K. Michael Hays described in his introduction to *The Oppositions Reader* (1998), the formal autonomy thesis was developed in response to pressure from other fields to expand the purview of architecture, and thereby risk, according to autonomy proponents, the foundations of the discipline: "The threat of the positive functionalist dogma and its progeny of behaviorism, operations research, [and] design methodologies... can be seen as nothing less than the unhinging of architecture from the very codes that constitute it as a functional part of culture - a rationalizing, quantifying leveling operation that would serve it up raw, as it were, as a mere condiment for the full optimizing appetite of consumer culture that *Oppositions*.. so tirelessly censored." See K. Michaels Hays, "Introduction: The Oppositions of Autonomy," in *The Oppositions Reader*, ed K. Michaels Hays (New York: Princeton University Press, 1998), xii. The following list of concurrent instances, all informing each other, is a further outline of important considerations which may have contributed to the retreat into formal autonomy

i. The social, political, and economic analysis of a late 60s and early 70s transformation from the formal to the *real* subsumption of non-capitalist economies and productions of subjectivity; i e the end of the outside. See Michael Hardt and Antonio Negri, *Empire* (Cambridge, MA: Harvard University Press, 2000), 229-232; and Read, *Micro-politics of Capitol*, 103-152.
ii The analysis of the mutually interdependent systems of natural resources and processes, economic growth, and uneven development of capitalism, and the globalization of the environmental crisis that results. See, for example, Meadows and Meadows, et al, *Limits to Growth* (New York: Universe Books, 1972).
iii. The popular acceptance of a politically produced 'energy crisis' which, paradoxically, further entrenched behaviors that were inefficient on an economic, political, and environmental level
iv The post-war population growth and deterioration of inner cities in America, and the subsequent proliferation of a non-architectural, developer-oriented suburban expansion.
v. The economic downturn in the United States and the concurrent development of an exhibition-oriented economy of 'paper architecture'

These problematics are emphasized in the ambivalent historicization, in the late 90s, of early 70s architectural theory as concerned with both opening up the discipline of architecture to relationships with other codes of signification, and, at the same time, limiting those relationships on the terms of the formal imperative. See the anthologies, edited by Hays, the *Oppositions Reader* and *Architecture Theory since 1968*. Separation of the formal and the real is perhaps best encapsulated in Hays' reference to Tafuri in the introduction to *Oppositions Reader*, where he indicates that Tafuri's pessimism is only justified in the context of non-architectural conditions "(surely even a cursory analysis of the 1970s – the oil crisis, inflation out of all proportion, Watergate, and the rest - would justify a certain pessimism)." (Hays, "Introduction" in *Oppositions Reader*, xiv). I reference this quote not to make a point about Tafuri, but to emphasize that Hays doesn't pursue the important question of why these external – and seemingly abhorrent – conditions were not more energetically engaged in the theorization and the practice of architecture.

24 See, for 'critical' architecture: Rosalind Krauss, "Death of a Hermeneutic Phantom: Materialization of the Sign in the Work of Peter Eisenman," in Peter Eisenman, *Houses of Cards* (New York: Oxford University Press, 1987), 166-184, written in 1977 and originally published in A + U 112 (January 1980), 189-219; and K. Michael Hays, "Critical Architecture: Between Culture and Form," *Perspecta* 22 (1984). For 'post-critical' the Somol and Whiting article is again the best example, along with Somol's "Dummy Text, or The Diagrammatic Basis of Contemporary Architecture" in Peter Eisenman, *Diogrom Diories* (New York: Universe, 1999).

25 See Althusser, "The Humanist Controversy," 273: "The essential epistemological obstacles in the basic system of the ideology of Theoretical Humanism (i.e Humanism with theoretical pretensions) are constituted by a number of notions that I have identified in the preceding analyses:

I the notion of Man (the essence or nature of Man);
II the notion of the human species or Human Genius (Man's generic essence, defined by consciousness, the heart, inter-subjectivity, etc.);
III. the notion of the 'concrete', 'real', etc., individual;
IV. the notion of the subject ('concrete' subjectivity, the subject constitutive of speculary relation, the process of alienation, history, etc.);
V. the notion of consciousness (for example, as the essential defining feature of the human species, or as the essence of the ideological),
VI. the notion of labor (as the essence of man);
VII. the notion of alienation (as the externalization of the Subject);
VIII. the notion of the dialectic (insofar as it implies a teleology.)"

26 Althusser, "The Humanist Controversy," 273-274

27 Ibid

28 Michel Foucault, "History of Systems of Thought" (1971), in *Language, Counter-Memory, Practice: Selected Essays and Interviews by Michel Foucault*, ed. Donald F Bouchard (Ithaca, NY: Cornell University Press, 1977), 199-204; 200. This essay is a summary of his course at the College de France in 1970-71, and is a concise formulation of the theoretical framework of his historical explorations.

29 Foucault, "History of Systems of Thought," 199

30 Ibid., 200.

31 Michel Foucault, "Preface" in Gilles Deleuze and Felix Guattari, *Anti-Oedipus: Capitalism and Schizophrenia* (Minneapolis: University of Minnesota Press, 1983), xiii

32 Foucault, "Preface," xiii-xiv. See also the recorded discussion between Foucault and Deleuze, "Intellectuals and Power" (1972), in Foucault, *Language, Counter-Memory, Practice*, 205-217.

33 Foucault, "Preface," xiv.

34 Gilles Deleuze and Felix Guattari, *A Thousand Plateaus* (Minneapolis: University of Minnesota Press, 1987), 142

35 Deleuze and Guattari, *A Thousand Plateaus*, 142.

36 Deleuze, *Foucault*, 36-37.

37 Deleuze and Guattari, *A Thousand Plateaus*, 142. This passage on the diagram and its rehearsal in Deleuze's book *Foucault*, have served as the primary source for definitions of the diagram in architecture theory. See, for example, the articles in *ANY* 23 "Diagram Work: Data Mechanics for a Topological Age" (December 1998) and Robert Somol and Sarah Whiting, "Notes around the Doppler Effect and Other Moods of Modernism," in *Perspecta 33: Mining Autonomy* (2002).

38 Somol and Whiting, "Doppler Effect," 75.

39 Gilles Deleuze and Felix Guattari, *What is Philosophy?* (New York: Columbia University Press, 1994), 108

40 Deleuze, *Foucault*, 37.

41 See, again, Somol and Whiting "Notes around the Doppler Effect"; as well as Michael Speaks' series of interviews under the name "Design Intelligence," published in *A+U* throughout 2002

42 See David Harvey, *Justice, Nature and the Geography of Difference* (Malden, MA: Blackwell, 1996), especially the chapter "The Domination of Nature and its Discontents," 120-149

43 In *The Three Ecologies*, Guattari developed the concept of transversality along these terms: transversal thought draws a section through the individual/psychological, social/institutional, and natural/ecological implications of a given instance or process. A transversal approach to 'architecture' would consider the relations of form, material, resource use, systems, etc., across all of these

registers, deploying new processes, and developing new practices, accordingly. See Guattari, *The Three Ecologies*, 33 and 58

44 I have elsewhere described the historical relationship between humanism, anti-humanism, and some types of architectural environmentalism in the 1960s, in my *People's Pork: or, the Crisis of Humanist Architectural Environmentalism* (unpublished, 2005) Humanism has driven (and overdetermined) most discussions of environmentalism in architecture, from 1960s environmental design (see, for example, Serge Chermayeff and Christopher Alexander *Community and Privacy: Towards a New Architecture of Humanism* [Garden City, NY: Doubleday, 1963]) to the recent turn of "New Urbanism" (Andreas Duany, Peter Calthorpe and others, see www katarxis3.com [online], for evidence of the rhetorical relationships between Duany's new work and that of Alexander). Other contemporary architects and theorists invested in ecology or environmentalism, from William McDonough to Norman Foster, all approach the problem saturated with an essentialist concept of nature (holistic practices, symmetry, mimicking nature's processes) and a mis-conceived notion of scale and causality, all rooted in humanist fantasies of the power of reason to improve to condition of mankind

45 See www citycarshare.org [online], accessed June 2005.

46 *City CarShare* incorporated as a non-profit because its multiplistic analysis indicated that a profit-driven system would not provide certain political benefits (such as the eventual replacement of parking lots with parkland) that could develop from its organization.

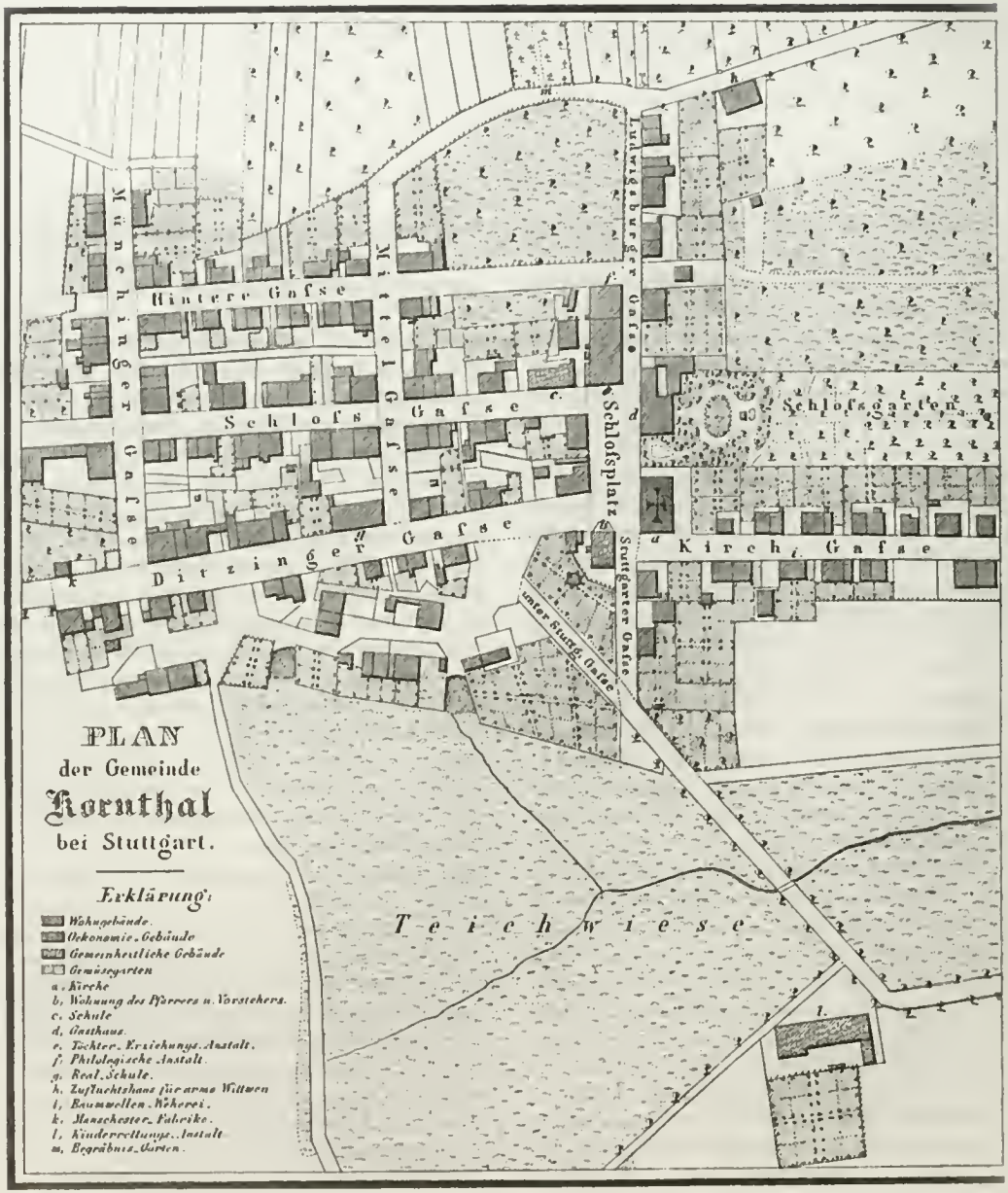


Fig. 1. Plan of Korntal.

Itohan Osayimwese

Pietism, Colonialism, and the Search for Utopia:

Pietist Space in Germany and the Gold Coast

It is no coincidence that Europe was "discovering" new worlds during the period in which utopian thought and practice flourished. Images of newly-discovered worlds, provided by explorers and circulated through travel narratives, offered viable alternatives if conditions at home were too confining for the active pursuit of utopian goals. This imbrication of utopian thought with colonialism is under-emphasized in both the literature on utopia and in Colonial Studies.

Utopia is mentioned most frequently in reference to European fantasies of colonial conquest and their underlying ideologies of cultural, racial, or religious superiority. For example, Susanne Zantop alluded to *utopion* thought in her discussion of the fantastical dimensions of German colonialism. German colonial fantasies were both full-fledged stories often unrelated to reality and "a peculiar imaginative configuration [a way of thinking] informing other forms of discourse."[1] It seems likely that the process of fantasizing, discussed by Zantop and others, used mechanisms and tropes such as psychic displacement and imaginary identification, that were similar to those used in utopian thought.[2]

The work of German Pietist missionaries in the eighteenth and nineteenth centuries offers a convincing account of the ways in which utopianism and colonialism overlapped in a specific historical context. Pietism was a post-Reformation Protestant movement popularized in Germany in the 1650s. It attempted to make religion relevant to everyday life in a secularizing world. Pietist theology advocated a retreat to an imagined past when the German *Zeitgeist* was grounded in traditional family life, communal subsistence-based economies, and lived Christianity.[3] This worldview inspired a search for utopia through colonialism and missionary work. Pietists differentiated themselves from other Protestant sects through their emphasis on the social mission. Charity would extend the benefits of Christianity to unbelievers, but just as importantly, social works were essential for the salvation of Pietists themselves.[4] In general, not enough attention is paid to the possibility that this concern for spiritual self-development served as a motivation for missionary complicity in colonialism. Pietism waned in the eighteenth century and then experienced a renaissance in the nineteenth century when industrialization was at its most pronounced.[5]

Pietists first attempted to enact their utopias on a regional level. The first Pietist utopian settlement was founded by radical Protestants fleeing persecution. It was established in 1722 at Herrnhut in eastern Germany.[6] Members formed a religious brotherhood called "the Unity of Moravian Brethren" (*Herrnhuter Brüdergemeinde*). This community was the prototype for many others in the region. Despite these separatist experiments, the Moravians still suffered from persecution. Moreover, the probability of discovering a "New Jerusalem" became slimmer with the triumph of reason in eighteenth century European society. This was an impetus to establish colonies in less restrictive parts of continental Europe, in the New World, Asia, and Africa.[7]

In their pursuit of utopia, the Pietists developed a particular approach to architecture, urban design, and material culture. New ideas about religious organization and spiritual life were first attempted at Herrnhut. It was here that the concept of the *Betsool* (prayer hall) emerged. Following Pietist reassessment of religious practices, the *Betsool* replaced the church as the center of the community, site of religious worship, and administrative headquarters. In contrast to existing religious

architecture, the guiding principle of Herrnhuter church design was unpretentious beauty ("*schlichte Schonheit*"). Excessive ornamentation was considered impious. In practice, this meant the stripping of stylistic elements to their essential forms, as can be seen at the subdued baroque *Betsaal* at Herrnhut. Several other multi-functional communal buildings, which housed dormitory-style residential quarters, kitchens, workshops, schoolrooms, etc., completed the settlement.[8]

Two subsequent Pietist towns from the early nineteenth century are of particular interest in the discussion of utopian colonialism. Korntal was built in 1819 to stem the flow of reawakened Pietists to Russia and elsewhere (Fig. 1).[9] Pietists were given freedom to practice their religion at this location. An influx of interested Pietists forced the community to use existing buildings until new ones could be built.[10] The *Betsaal* was located at the center of the settlement. It repeated the simplified massing and detailing of the Herrnhut *Betsaal*. Other communal buildings such as the guesthouse, private post office, community store, city hall, and several schoolhouses formed a square in front of the *Betsaal*. Domestic buildings, arranged orthogonally, articulated the outer perimeter. The entire settlement was surrounded by fields and orchards, in which the residents practiced traditional farming methods. The *Gottesacker* ("God's field" or cemetery) was a landscaped grid located on the periphery of the town. A conscious process of development guided the location of new buildings, determined building height and aesthetics, and maintained the centrality of the *Betsaal* and the associated centrality of religion. Clear boundaries defined the settlement and strict edicts maintained its isolation from broader German society.[11]

Wilhelmsdorf was established four years later (1824).[12] Unlike Korntal, Wilhelmsdorf was built according to a predetermined plan (Fig. 2). In Wilhelmsdorf, the *Betsaal* was isolated in a plaza at the exact center of the settlement which itself formed the outline of a cross.[13] The plan included all the characteristic elements of Herrnhut and Korntal. The overt symbolism of the Wilhelmsdorf plan represented a new perception of space and time that imagined that Christianity could be inscribed on the landscape in order to mold human society.[14]

Pietist settlements in the eighteenth and nineteenth century were highly recognizable. Ultimately, the Pietists used architectural and urban design as pedagogical tools to affirm existing theology and to generate and reproduce new interpretations of religious doctrines. Residents "read" the landscape in their daily movements.[15] Pietist settlements combined both urban and rural character, selectively combining the best elements of traditional life with modern innovations.[16] These heterotopias were likely influenced by earlier and contemporaneous experiments in communal living, factory towns, and low income housing.

The reinvigoration of Pietism in the nineteenth century led to a renewed emphasis on foreign missionary work. Working in the Pietist tradition, the Swiss-German Basel Mission pursued missionary work in the Gold Coast, West Africa from 1828 onwards.[17] The mission implemented four broad spatial policies to serve utopian goals in the Gold Coast. The first of these policies, a choice of rural over urban location, was framed in terms of converting indigenous peoples who had not already been contaminated by European presence along the coast. Interpreting this choice, we could say that the boundaries that differentiated the urban from the rural also defined the limits of the enclosure within which certain modes of power/knowledge, part of the cultural baggage of the missionaries, were unleashed.

Secondly, the mission established separate settlements (called "Salem") for themselves and their Christian converts within rural contexts. Mission stations were built next to but separate from existing indigenous settlements (Fig. 3). Apart from an interest in retaining new converts, this policy of separation also reflected concern for the spiritual health of missionaries themselves since exposure to heathen practices was seen as a temptation for those in the field.[18] This policy prefigured subsequent dualistic models of urban development in the Gold Coast.

The siting of the mission station at the center of Salem was a third way for the Basel Mission to retain its ideological integrity. A mission house built in a Swiss-German *Volk* style formed the symbolic core of the mission station (Fig. 4). Auxiliary buildings, including boys and girls schools, apartments for Europeans, a hospital, apartments for native teachers, storerooms, and houses for African converts were arranged orthogonally around the mission house. The mission house provided a space for religious worship until a *Betsaal* could be built. The quarter for African converts was often located on the periphery of the ensemble implying a socio-spatial hierarchy for Salem residents. The mission station and

Salem were clearly differentiated from the "heathen town" with a combination of fences, walls, and roads.

In a few cases the symbolism of the spatial organization of the mission station was even more overt. A proposal for the mission station at Kyebi (1861) shares some characteristics with the Wilhelmsdorf plan (Fig. 5). In both cases, the central location of the church represented the perceived or intended centrality of religious life. Mission settlements in the Gold Coast thus shared many elements with Pietist settlements in Germany including an overall separatist predilection, choice of rural over urban contexts, emphasis on communalism, simple architectural detailing and the use of traditional styles, reliance on the material environment to inculcate morality, etc. However, close analysis suggests that some new forms were developed upon interpretation in the West African context. One example is the "Basel Mission Type" described below.

The "Basel Mission Type" was the most highly articulated spatial practice pursued by the Basel Mission.[19] The Basel Mission Type was exemplified in the mission school consisting of a series of buildings oriented to create a quadrangle (Fig. 6). The primary structure was a two-story building with wide verandahs on both floors. Because elevation above ground level provided access to pure, cool air, upper levels were dedicated to living spaces for European teachers. The verandahs were major circulation routes and important public spaces. The ground floor was occupied by classrooms and other administrative functions. Single-story wings on either side of the central structure housed dormitories, kitchens, workshops, etc. Typical courtyard elements included a communal well, a school bell, and work gardens. A fence completed the ensemble, transforming the mission school into an enclosure within a series of enclosures. A case can be made that the obsessive repetition of the courtyard form and bungalow type in Basel Mission building activity across the region constituted an appropriation of indigenous West African forms and building practices.[20]

The Pietist approach to space supported the simultaneous evangelizing, civilizing, and utopian aims of the Basel Mission. Missionaries conceived of both a vertical and horizontal movement of ideas about order, discipline, and rationality, from missionaries and mission-educated children to the larger community. The school, like the mission house and Salem, was a model that encapsulated Christian European power, and enforced an allegedly superior worldview. These

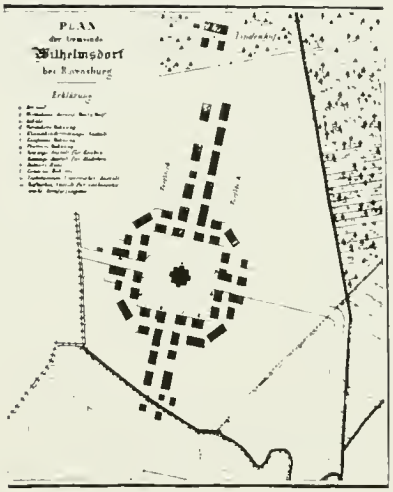


Fig. 2: Plan of Wilhelmsdorf.

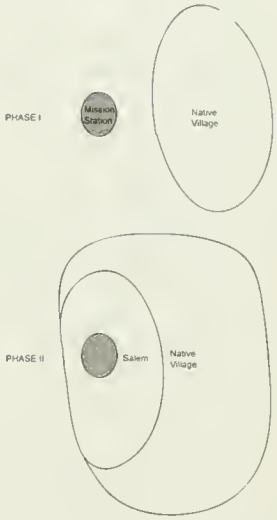


Fig. 3: Diagram showing location of Salem

Fig 5: Plan of Mission Station at Kyebi.

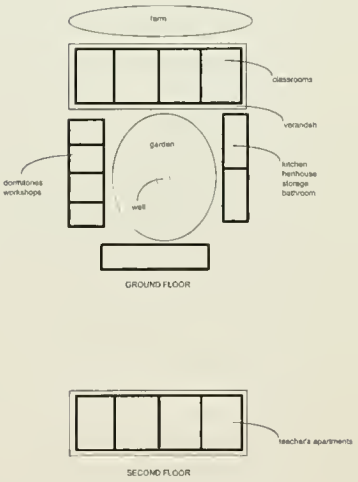


Fig 6: Diagrammatic Plan showing Basel Mission Type

aims were supplemented by an academic curriculum in which material objects, large and small, were thought to inculcate western rationality. Through the curriculum, and the design of the school and of the greater built environment, the Pietists sought nothing less than the complete transformation of the individual and society.

In considering the period of Pietist utopian colonialism from the eighteenth to nineteenth centuries, four overlapping categories emerge. There is a clear distinction between colonies established within Germany and the broader European context, and colonies established in "new worlds." Some of these colonies were designed primarily to accommodate the evangelization of "heathen" peoples, while others were meant to focus on the perpetuation of a Pietist way of life through emigration. Preliminary comparison of spatial and social organization and practices pursued at different types of settlements discloses significant overlap. Pietist heterotopian settlements were prototypes intended to be replicated *od infinitum* to create an empire of paradises and fulfill the Christian utopian dream. The spread of Christianity in the Gold Coast and in other former Pietist colonies speaks to the success of this global project.

endnotes

1 Susanne Zantop, *Colonial Fantasies: Conquest, Family, and Nation in Precolonial Germany, 1770-1870* (Durham: Duke University Press, 1997).

2 George Steinmetz, "From 'Native Policy' to Extermination?: German Southwest Africa, 1904," *Peripherie. Zeitschrift fur Politik und Oekonomie der Dritten Welt* (forthcoming).

3 See for example F. Ernest Stoeffler, *The Rise of Evangelical Pietism* (Leiden: E. J. Brill, 1965); Birgit Meyer, *Translating the Devil: An African Appropriation of Pietist Protestantism, the Case of the Peki Ewe in Southeastern Ghana, 1847-1922* (Amsterdam: Ph.D diss., University of Amsterdam, 1995).

4 K. Knight, *The Catholic Encyclopedia* vol. xiii, http://newadvent.org/cathen/12080c.htm [online], accessed 17 December, 2004

5 Andreas Gestrich, "Alltag im pietistischen Dorf: Burgerliche Religiositat in Landlicher Lebenswelt," *Alte Stadt* 20/1, 47-59

6 Hartmut Beck, "Die Herrnhuter: Baukultur im pietistischen Zeitalter des 18. Jahrhunderts," *Kunst und Kirche* 3 (1987), 186-189.

7 J. S. Cummins, *Christianity and Missions, 1450-1800* (Malden, Massachusetts: Blackwell, 1997).

8 Beck, 186-189.

9 J. Stumpp, "Die Deutschensiedlungen," in *Heimatbuch der Stadt Korntal*, ed. Herbert Lorenz (Korntal: Die Stadt, 1969), 61.

10 Lothar Sigloch, *Zur Geschichte von Korntal und Muenchingen. Korntaler Ansichten, Siedlungsaspekte der Gemeinde Korntal* (Korntal-Muenchingen: Korntal-Muenchingen Stadtarchiv, 1994), 32.

11 Ibid.

12 Werner Raupp, *Gelebter Glaube: Erfahrungen und Lebenszeugnisse aus unserem Land* (Metzingen/Wurttemberg: Ernst-Franz Verlag, 1993).

13 Gestrich, 53.

14 Ibid

15 Meyer, *Translating the Devil*.

16 Beck, 186-189, Gestrich, 53.

17 Peter Schweizer, *Survivors of the Gold Coast: The Basel Missionaries in the Gold Coast* (Accra: Smartline, 2000).

18 Wilhelm Schlatter, *Geschichte der Basler Mission* (Basel: Verlag der Basler, 1916).

19 Jesse Jones, *Education in Africa: A Study of West, South, and Equatorial Africa by the African Education Commission under the auspices of the Phelps-Stokes Fund and Foreign Mission Societies of North America and Europe* (New York: Phelps-Stokes Fund, 1922).

20 See Anthony King, *The Bungalow: The Production of a Global Culture*. 2nd ed. (New York: Oxford University Press, 1995) and Tarikhu Farrar, *Building Technology and Settlement Planning in a West African Civilization. Precolonial Akan Cities and Towns* (Lewiston: E. Mellen Press, 1996) for descriptions of indigenous building types in the region.

Fig. 4 Typical Mission House in the Gold Coast.

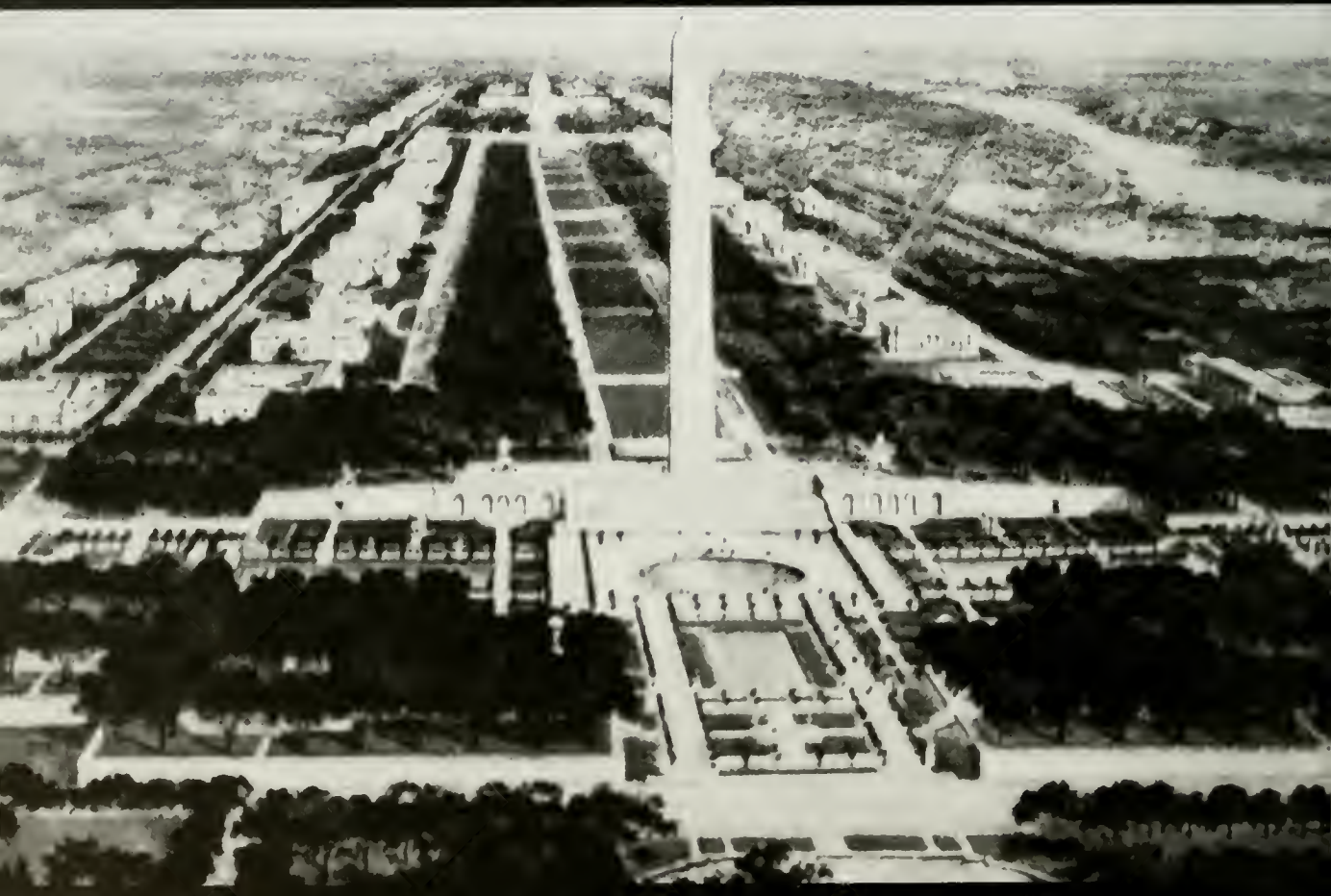


Fig. 5: Senate Park Commission, drawing by Robert Blum, Lincoln Memorial in Washington, 1902.

Wolfgang Sonne

The Capital City as a Microcosm of the State: The Case of Washington

How may a capital city be conceived as a microcosm of the state? The concept of microcosm establishes a meaningful relation between a larger world and a smaller one, the latter being part of the first and at the same time being similar to it. This seems to describe exactly the position of a capital city within its state – at least a capital city which was designed to express its role. But how can a city as a physical entity become similar to the state as a political entity – and how can we appropriately describe the processes mediating between the two?

This paper will explore the ways in which Washington was envisioned as a microcosm of the United States, focusing on three aspects: Washington as an equivalent of the geographic situation of the country, as a diagram of the political system, and as a representative of the political values of the state. Finally I will inquire into how the concept of microcosm may be transformed into a theory of representation in order to describe more closely the mediating processes between the city and the state.

1. Mirroring the country: Washington as a microcosm of the United States' political geography

Displaying the state in the city by creating a refiguration of the state's political-geographic arrangement was the most obvious means to conceive Washington as a microcosm of the United States.[1] This idea stood behind the leading symbolic element in Charles Pierre L'Enfant's plan for the new city in 1791, and it returned in the plan proposed by the Senate Park Commission in 1902. L'Enfant's plan encompassed different elements of European and American city planning; departing from the hilltop location for the parliament building and the president's house, he designed a comprehensive grid system into which he integrated diagonal roads. The two principal centers were accessed via radial streets and surrounded by gardens laid out in an axial arrangement. The ensemble could be understood as a confident adaptation of urban plans for royal capitals from the European era of absolutism to the specific requirements of the American republic. (Fig. 1)

But the aim was not only to bring the grandeur and dignity of European city planning to America. The plan also tried to embody the state in the city. It was to be a visible expression of the Confederation of States by naming the large diagonal avenues after the 13 member states.[2] The location of the streets in the city corresponded to the location of the states within the country, the northern states were clustered in the northern part of the city, the southern states in the southern part and the mid-Atlantic states in the center. Moreover, the rank of each state was expressed in the naming of the streets. Thus Pennsylvania, as the home of Philadelphia and historic site of the Declaration of Independence as well as the signing of the Constitution, was allocated to the principal diagonal between Capitol and White House. The streets not only formed a mirror image of the geographical distribution of the states, but also created a hierarchical system which illustrated their historical and social importance. As all this was arranged in a pattern of ideal geometrical forms which were indissolubly interwoven, the street system aimed at symbolising an ideal and indissoluble nation.

The plan mirrored yet another political-geographic situation in a strikingly effective manner. The garden axis spread out westwards from the Capitol and southwards from the

White House. These axes were not confined by buildings and seemed to lead towards infinity: an open conception that could – together with the geographical disposition of the streets – be understood as a symbol of the frontier policy, the seemingly infinite expansion towards the West and South. This orientation was especially perceivable for the acting members of the legislative and executive bodies: from both the Capitol and the White House the splendid garden vistas towards West and South should embody the "manifest destiny" of the new nation.

This layout was reconfigured in the plan which the Senate Park Commission presented in 1902.[3] (Fig. 2 & 3) Here the members of the commission – the architects Daniel Hudson Burnham and Charles Follen McKim, the landscape architect Frederick Law Olmsted Jr. and the sculptor Augustus Saint-Gaudens – had terminated both axes with monuments: the Lincoln Memorial at the Western end of the Mall and a then undedicated monument, which became the Jefferson Monument later, at the Southern end, as *points de vues*. This new layout of the mall was described in the report as follows: "Regarding the Monument as the center, the Capitol as the base, and the White House as the extremity of one arm of a Latin cross, we have at the head of the composition on the banks of the Potomac a memorial site of the greatest possible dignity, with a second and only less commanding site at the extremity of the second arm."[4] This created a balanced composition, centred around the obelisk of the Washington monument, and created a focal point for the mall and the city in itself. Not surprisingly, the US just in the early 1890s had officially abandoned its frontier policies as the expansion had reached its geographic limits: Mexico to the South and the Pacific coast to the West. Thus again the arrangement of the mall was in clear parallel to the political-geographic situation: no longer oriented towards the infinite nature but terminated by memorials which now limited the composition by allusions to the state's history.

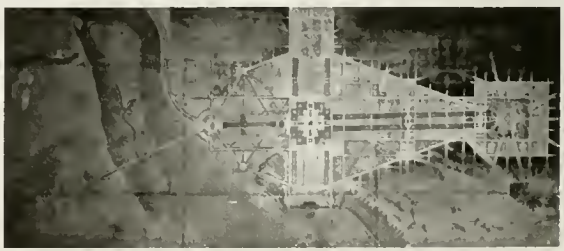
2. "Record the trilogy of our political structure": Washington as a microcosm of the United States' political system

A further way of designing Washington as a microcosm of the state was to represent its specific political system. Even if L'Enfant referred to European absolutist urban design, he adapted it to the specific situation of the North American republican state. While all major planning devices such as axes, *points de vues*, geometry, symmetry, scale, etc. followed the European model, the plan was not centered around one palace. It had two focal points from which multiple avenues radiated: the Capitol and the White House as seats of the legislative and executive bodies of state power. However, this conceptual reflection of the political constitution – the distribution of the powers in a democracy – was only partially implemented. If the distinction between legislative and executive was clearly illustrated in the plan, the judiciary was not allocated to an equally important place. Therefore it was not visible in the plan as an equivalent power. Indeed, the Supreme Court would in fact sit for over a century in the Capitol before its own monumental building was erected next to the Capitol in the 1930s.

This exclusion of a symbolic monument for the judiciary branch within L'Enfant's scheme was not satisfactory to the Senate Park Commission. They gave much attention to emphasize the distinction of powers by designing different groups of public buildings; one group of Congress offices around the Capitol, one group of ministries around the White House. In his unpublished memoirs, McKim's lead designer William T. Partridge made clear the political considerations of these arrangements: the White House was surrounded by the "executive offices" and "the legislative group was to surround

Fig. 1: Charles Pierre L'Enfant, Washington, 1791.

Fig. 2: Senate Park Commission, Mall in Washington, 1902



the Capitol Grounds. The Supreme Court was content in their old Senate of the Capitol building, and so no separate judicial building was considered."[5] In other words, the Commission well considered a meaningful distribution but did not allocate a new significant site for the judiciary for simple practical reasons.

Partridge was not entirely satisfied with this solution personally. In his memoirs he wondered several times about the distribution of government buildings in L'Enfant's plan: "But we here ask, why two buildings and not three? The Government was a trilogy of legislative, executive and judicial branches. Where was the Supreme Court in the choice of locations for the principal public buildings? This third arm was allotted a site where the City Hall was afterwards erected."[6] This did not seem appropriate in his view. He felt that an impressive triangular composition with the Supreme Court occupying the site of the future Jefferson Memorial would be best. But the commission hesitated in choosing this place as it was too distant from the city and eventually located the Supreme Court across from the Capitol.

Finally, Partridge accepted this solution, styling Washington as the very embodiment of democracy in a 1943 lecture: "Our Capital City stands in the minds of all Americans as the symbol of our country. In Europe despotic sovereigns ruled from their palaces surrounded by their court, their ministers, and advisors. Thus these Versailles and Kremlins became the very symbols of their respective nations. So this, the new Capital City, the seat of a new Government, would, in the mind of its founder become Democracy's symbol in the New World. Furthermore, the three buildings for the accommodation of Congress, the President and the Supreme Court would record the trilogy of our political structure."[7] It was especially the significant location of the buildings for at least two of the separated powers of the democratic state which made Washington a microcosm of the state's constitution.

3. "Typifying ideals of Liberty and Freedom": Washington as a microcosm of the United States' political values

Apart from this representation of the political system, the planning of Washington was infiltrated with further, even more specific political ambitions and values. The clients and authors of the Park Commission Plan made colorful claims about their political-symbolic intentions. In the plan's report, which was finally released in February 1902, Senator McMillan stated the specific goals: "recreation and health of a constantly growing population" as well as "beauty and dignity of the national capital."[8] He was interested in creating a capital that would be an appropriate reflection of the state, expressing his desire in closing "that the city which Washington and Jefferson planned with so much care and with such prophetic vision will continue to expand, keeping pace with national advancement, until it becomes the visible expression of the power and taste of the people of the United States."[9]

Charles Moore emphasized these aesthetic and symbolic aims early on: "To understand the plans requires patient study, because they aim not only to satisfy the eye trained to the perception of beauty, but they also make a direct appeal to the intellect, by the fact of their reasonableness and of the historic consciousness they embody."[10] The plan included a number of historic references and also arranged them into a symbolic landscape the entirety of which was intended to suggest an overarching meaning. The most condensed description is found in Moore's unpublished memoirs. He distills the genesis of the eloquent comprehensive plan as a vision appearing to members of the commission on the steps of the round temple at the Villa Borghese in Rome during their study trip to European planning models in 1901:

Fig. 3: Senate Park Commission, drawing by F. L. V. Hoppin, Washington, 1902

Fig. 5: Senate Park Commission, drawing by Robert Blum, Lincoln Memorial in Washington, 1902.

Slowly the vision of the new Washington arose: the long, uninterrupted stretch of the Mall westward from the Capitol to the Monument, to be brought into a new axis; thence the vista continued over a long basin reflecting the contemplated memorial to Abraham Lincoln, located at the end of a great composition such as L'Enfant would have delighted in. From that memorial, a low bridge spanning the Potomac (symbol of the union of North and South as foretold by Andrew Jackson and Daniel Webster) leading both to the heights of Arlington where Lincoln's soldiers rest in eternal peace, and also to Mount Vernon, shrine of the American people. Washington the founder, Lincoln the saviour of the nation, standing on the same axis with the Capitol whence emanates the spirit of democracy. An embodiment of national historic consciousness proclaiming and exalting the two American contributions to world civilization – the ideals of Freedom and Liberty.[11]

Especially the Mall, the ceremonial center of the city, was carefully laid out according to these political ideas. (Fig. 4) The existing buildings of the Capitol and the White House were surrounded with uniform buildings; in a similar manner, the Mall was accompanied by comparable simple classical structures. In an article published in the *Independent* in 1902, Frederick Law Olmsted, Jr. interpreted the resulting aesthetic unity as an appropriate expression of the nation's political unity: "We are not a congress of independent communities, but an indissoluble Union, and our national capital should be the physical expression of that Union."[12]

The core of the center, in turn, was marked by the Washington Monument and a detailed formal garden. Ideally located at the intersection of the axes, it was to have special significance in terms of the composition of the entire ensemble. While the commission succeeded in downplaying the Monument's eccentric position on the Capitol axis as a visual 'trick', this was impossible in the case of the axis leading to the White House, which veered off in a far more pronounced fashion. An alternative solution had to be found for the intersection of the axes, which would harmonize with the monumental obelisk. The commission opted for a strategy of opposites: it created a "sunken garden" next to the soaring monument; it placed the reflecting void of a water surface in contrast to the massive presence of the monument; and combined the square footprint of the obelisk with a round pool, the only pure geometric forms on the Mall owing to the distortions that were otherwise necessary because of the shift of the main axis. The participants soon agreed that this centerpiece should be a site of quasi-religious reverence. Thus Burnham had noted with regard to the composition of the "Grand Court" in a letter to McKim: "The Court is a shrine, to which one should climb, constantly going up."[13] In his usual emphatic style, Partridge described the intentions for the center in his memoirs as follows: "The Monument was to become a place of pilgrimage."[14]

The Lincoln Memorial was conceived as equally important. (Fig. 5) Situated at the junction of Mall and Arlington Memorial Bridge, it was meant to symbolize the enduring union between North and South in memoriam of Abraham Lincoln, the "Savior of the Nation." According to Partridge, McKim had chosen an open structure such as the "Brandenburg Gate in Berlin" as his model for this very reason: without solid front or rear, it was accessible from both sides, reflecting its mediating position between the District of Columbia and Virginia.[15] The report specified that: "In type it should possess the quality of universality"[16] – thereby identifying universality as a value that would emphasize the validity of the American model. The ensemble composed of the Washington Monument and Lincoln Memorial was in its entirety laid out as a memorial landscape. In a subsequent work, Moore inscribed the following meaning into this ensemble:

Typifying ideals of Liberty and Freedom wrought out in this new world, Washington and Lincoln are the two names the United States adds to the short roll of the men of all ages. Where was ever a composition of equal historical significance? Other nations glorify the triumph of arms; this republic would lift high the banner of peace.[17]

Peace thus became a consequence of American freedom, such was the message of the presidential memorials according to the authors of the plan.

The ambitions were set even higher, however. The Arlington Memorial Bridge was intended to link the capital city with eternity and life beyond. The report asked for – giving a quote from Daniel Webster, echoing the desire of President Andrew Jackson – "arches of ever-enduring granite, symbolical of the firmly established union of the North and the South."[18] The bridge would not only link the southern and the northern states, but also the city of the living with the city of the dead. And not just with any necropolis, but with one that was the

immediate consequence of an event that had fundamentally shaped the Union: the heroes and soldiers of the Civil War were buried in Arlington Cemetery. No site seemed more capable of awakening patriotic sentiment, for: "nothing could be more impressive than the rank after rank of white stones, inconspicuous in themselves, covering the gentle, wooded slopes, and producing the desired effect of a vast army in its last resting place."[19] The entire ensemble of city and cemetery should be symbolically understood in much the same way as the army of the dead was visually represented in the cemetery: the city of the living is anchored by the city of the dead, the present is justified by history, life on earth has meaning through life beyond.

With a kind of religious conviction, the plan aimed to transmit quite specific values and ambitions: the unity of the nation, its power, its eternity, its universality, democracy, freedom, liberty and peace. With the embodiment of all these ideals, the capital city was to become also a microcosm of the invisible, abstract values, which were meant to lead the macrocosm of the nations' politics.

4. From microcosm to representation: the voluntary construction of meaning

But how did the capital as a city convey all this meaning? Using the concept of microcosm with its claim for similarity between the larger and the smaller world, we can indeed ascertain a physical analogy between the location of the streets in the capital city and the location of the states in the nation. But what kind of similarity may be recognised between the separation of the buildings for the principal powers and the separation of powers in a democratic state? It is no longer a physical resemblance, as the separation of powers is an abstract concept. This concept can only be mediated by a specific representation of the political system – a diagram which shows the abstract concept as a visible arrangement on a sheet of paper – and it is therefore a much more complex kind of analogy. And even more difficult: how may abstract values like freedom and peace be translated into forms which can be interpreted as similar? In this case there is not even a mediating step which might put the form into a relation of similarity to its content. It seems we have reached the limits of the concept of microcosm which aims to explain relations by postulating similarities.

A closer description of those processes may result from a concept of representation, in which the different means of reference are described as different sorts of signs.[20] Within architecture and urban design, the most helpful differentiation is still that of Charles Sanders Peirce with its distinction between the two degenerate forms of the sign – the icon and the index – and the genuine sign – the symbol.[21] Icons and indices were not true signs for Peirce because they had not been created for the purpose of communication. An icon is characterised by the fact that it possesses the qualities which it communicates. He gave the example of a triangle drawn on a piece of paper, representing the geometric figure of a triangle by displaying its qualities. An index is characterised by the fact that it stands in physical-causal relation to that which it signifies. Thus, a weather vane indicates the wind direction, as the wind itself is the physical cause of the position of the vane. Symbols, on the other hand, derive their meaning solely from conventional allocations. Language is the system of symbols *par excellence* in Peirce's philosophy because its meaning derives solely from the fact that it is understood as meaningful. The symbol alone is a wholly representational sign; an icon does not represent, it is; an index, too, does not represent, but follows.

If we now adapt these categories of signs to our example we will see that they quite precisely describe the different ways of generating meaning within the city. The representation of the geographic situation – formerly described as similar – is an icon in the sense that the city plan possesses some identical qualities in regards to the layout of the country. Another icon is the centralized layout for the Capitol and the White House: it shows the central position of these political institutions by virtue of their centralized design. Or unity is iconically perceivable in the uniform design of the public buildings. Nevertheless, this unity is only an icon for the uniformity in the building's design, not yet for the political unity of the nation: this would be a purely symbolic relation which would have to be mediated by words.

Furthermore, we can say that some of the specific political values are represented in an indexical manner. Thus, power is immediately visible in the scale and monumentality of the city. As only an established political power could be able to arrange such a large ordered environment, the ensemble is the causal consequence of a political power which it shows as an index. Also the "taste of the people of the United States" –

as claimed by McMillan – has its direct impact on the design of the city and its buildings: their specific form is a direct consequence of the taste of their designers.

Finally, we must admit that all other intended meanings use the mode of the symbol. They are arbitrary in the sense that the meaning depends on the voluntary decision what a specific form is meant to represent. Freedom, liberty and peace neither have any similarity to the classical forms used for the Lincoln Memorial nor are these classical forms a direct consequence of freedom, liberty and peace. These forms may only possess this specific meaning because the designers and clients wanted them to be representatives of these values. And only by mediating this will through words – be it the inscriptions on the monuments, the accompanying planning reports or articles from the wider press campaign – it could become understandable and the mediating process could become successful. Furthermore, the representation of the democratic constitution by the separation of the buildings for the separated powers is purely symbolic: it can only be understood if the theory of separating powers as well as the specific function of these buildings is mediated by words.

Here we see the specific constitution of symbols in architecture and urban design: they only function in connection to words. And to correctly interpret them, the observer must be aware of the arbitrary meaning of the surrounding discourse. Symbols may be able to convey fairly specific values; this comes at the price, however, that their meaning can only be conveyed through convention, and that it may be short-lived or misunderstood. The relationship between icons and indices and their respective meanings, on the other hand, is intrinsic: they are self-explanatory. This, too, comes at a price, however, namely that they are only able to convey very general messages in architecture and urban design: icons convey a spatial-physical quality, while indices show a designing power.

If the relation between the microcosm and the macrocosm was an intrinsic similarity – one world mirrored by another, and therefore ideally natural and unchangeable – the relation between the city's form and the state's values becomes more differentiated with a theory of representation. Some of the values and qualities are indeed represented in an intrinsic way, be it as icons or indices – and they will always be understood, at least as long as there is someone willing or able to understand them. But more specific political ideals, especially, are only represented in an arbitrary way by symbols; their original message has to be reconstructed, and their meaning may change fundamentally, as many politically conceived buildings in the world may prove.

Washington as a microcosm of the United States, mirroring the political values and qualities in a natural and lasting manner – this may have been the intention of the designing politicians and architects. Some messages may come across in an unchangeable way – the centrality of some institutions or the power which was necessary to realize such a well ordered city. But most of the specific messages are far less stable than the actors may have hoped for – they simply disappear if they are not permanently renewed by an active discourse surrounding the existing forms.

endnotes

1 John William Reps, *Monumental Washington. The Planning and Development of the Capital Center*, (Princeton, 1967); Frederick Gutheim (ed.), *Worthy of the Nation. The History of Planning for the National Capital*, (Washington, 1977); John William Reps, *Washington on View The Nation's Capital since 1790*, (Chapel Hill, North Carolina, 1991); Richard Longstreth (ed.), *The Mall in Washington 1791-1991*, (Hanover and London, 1991).

2 Pamela Scott, "'This Vast Empire'. The Iconography of the Mall 1791-1848," in Longstreth, 37-58 Cf. Hans Paul Caemmerer, *The Life of Pierre Charles L'Enfant, Planner of the City Beautiful, the City of Washington*, (Washington, 1950); Kenneth R. Bowling, *Creating the Federal City 1774-1800. Potomac Fever*, (Washington, 1988); Kenneth R. Bowling, *The Creation of Washington, D.C. The Idea and Location of the American Capital*, (Fairfax, 1991).

3 Wolfgang Sonne, *Representing the State. Capital City Planning in the Early Twentieth Century*, (Munich, London and New York, 2003), 50-89. Cf. Jon A. Peterson, "The Hidden Origins of the McMillan Plan for Washington, D. C., 1900-1902," in Antoinette J. Lee (ed.), *Historical Perspectives on Urban Design: Washington, D. C. 1890-1910*, (Washington, 1983), 3-18, Jon A. Peterson, "The Nation's First Comprehensive City Plan. A Political Analysis of the McMillan Plan for Washington, D.C., 1900-1902," *Journal of the American Planning Association*, Vol. 51, No. 2, 1985, 134-150; Jon A. Peterson, *The Birth of City Planning in the United States 1840-1917*, (Baltimore and London, 2003), 77-97.

4 Charles Moore (ed.), *The Improvement of the Park System of the District of Columbia I. – Report of the Senate Committee on the District of Columbia II. – Report of the Park Commission*, 57th Congress, 1st Session, Senate Report No. 166, (Washington, 1902), 36.

5 William T Partridge, *Reminiscences*, typescript 1953, The Mall – Washington, D C., 20; Avery Library, Archives, F 42-44, C 96 Box II, Ware Collection.

6 William T. Partridge, *Reminiscences*, typescript 1940, 6-7; National Archives, R.G. 328, National Capital Planning Commission, 9 and 17 Historical Data File, respectively, William T Partridge, Box 98 and 105.

7 National Archives, R G. 328, National Capital Planning Commission, 9 and 17 Historical Data File, respectively, William T. Partridge, Box 98.

8 Moore, 7.

9 Ibid , 19

10 In Glenn Brown (ed), *Proceedings of the 36th Annual Convention of the American Institute of Architects December 1902*, (Washington, 1903), 60.

11 Library of Congress, Charles Moore Papers, Box 21, 91-92.

12 Frederick Law Olmsted, Jr., "Beautifying a City," *The Independent*, Vol. 54, No. 2801, 1902, 1877.

13 Letter from Burnham to McKim, August 30, 1901; The Art Institute of Chicago, Burnham Papers, Series 1, Letterbooks, Vol. 9, sheets 3-5.

14 William T. Partridge, *Reminiscences*, typescript 1947, 11, National Archives, R.G 328, National Capital Planning Commission, 9 and 17 Historical Data File, respectively, William T. Partridge, Box 105. See also: William T. Partridge, Reminiscences, typescript 1953, The Mall – Washington, D. C., 12; Avery Library, Archives, F 42-44, C 96 Box II, Ware Collection.

15 William T. Partridge, *Reminiscences*, typescript 1947, 12; National Archives, R.G 328, National Capital Planning Commission, 9 and 17 Historical Data File, respectively, William T. Partridge, Box 105

16 Moore, 52

17 Moore, *Makers of Washington*, typescript, 121, Library of Congress, Manuscript Division, Charles Moore Papers, Box 22.

18 Moore, 55.

19 Ibid , 59.

20 Sonne, 300-315.

21 Charles Sanders Peirce, *Collected Papers*, ed. Charles Hartshorne, Paul Weiss and Arthur W Burks, 8 vols., (Cambridge, Massachussetts, 1931-58), Charles Sanders Peirce, *Writings of Charles S. Peirce A Chronological Edition*, ed. Max H. Fisch, 6 vols., (Bloomington, 1982-2000); Charles Sanders Peirce, *Peirce on Signs. Writings on Semiotics*, ed James Hoopes, (Chapel Hill, 1991).

A fall leads and a division.

Peter Mörtenböck

Free Running and the Hugged City

Parkour, le parkour, freerun, free running, or PK. Whether you refer to this new urban practice as a sport, a risky pastime, or an art, it rapidly grows and constitutes microcosmic sites in cities worldwide. Free running corrupts the original uses of spatial structures. It is dedicated to moving across obstacles designed to restrict or that restrict by nature. Walls, fences, gaps, or rails become a kind of urban furniture. Moving fluently across any obstacle with as much agility as possible, parkourists employ no tools other than their own bodies, since the aim of parkour is to enjoy maximum freedom in one's environment.

> *Draw a straight line on a map of your home town. Start from point A, and go to the point B. Don't consider the elements which are in your way (barriers, walls, wire fences, trees, houses, buildings) as obstacles. Hug them: Climb, get over, jump: Let your imagination flow: You're now doing parkour. (Jeremy, Urban Freeflow website, 2005)*[1]

A mix of physicality and philosophy, this is a movement informed by a diverse set of modern cultural reference points including video games, movies such as *The Matrix*, break dancing, and Jackie Chan. Parkour happens locally – on playgrounds, school yards, housing estates or in and outside of public buildings – but it is disseminated mainly through global online communications and media representations. Free running thrives and prospers through a rapidly growing network of non-profit and commercial websites offering links to local groups, maps, forums, training advice, articles, clothing merchandise, videos and advertising clips. There is an intrinsic proximity to a visual culture which has emerged in blurring the boundaries between various representational genres characteristic of today's urban texture, including videos, billboards, computer games and mobile phones. The ultimate aim of these emerging urban formats is to cross physical thresholds and to extend the possibilities of urban conduct. Similarly, free runners perform moves that belong to the imagery of fantasy films, extreme sports or video games. Serving as living imagery, they bring together the ordinary and the extraordinary. They emulate spectacular moves by taking them out of their fictional context and inserting them into the mundane world of everyday suburban life.

Free running originated in the suburbs of Lisses near Paris in the late 1980s. It was created by David Belle and Sébastien Foucan from a mixture of elements which are sports in general, and particularly urban sliding sports such as skateboarding and martial arts. The inspiration came from many sources, not least the *Natural Method of Physical Culture* developed by George Hébert (1875-1957) in the early twentieth century.[2] A physical education tutor and former naval officer, George Hébert combined various elements of 'natural' training (i.e. parcour training in non-designed environments) aimed at achieving a better balance of physical, energetic and moral virtues, which proved influential for a new ethos of physical education at the time. David Belle was introduced to these concepts by his father, a Vietnam veteran. A small group of local adolescents formed to practice more specific moves and became the epicenter of what turned out to develop into a global urban movement.[3]

Questions of authenticity have arisen alongside authorial issues, as part of the group split off from the original parkour scene, rebranding themselves as yamakasis (meaning strong man, strong spirit) for a feature film[4] in which they acted

as urban stuntmen, carrying with them a certain kamikaze attitude. In contrast to the image created by the film, free runners (or traceurs, as they prefer to call themselves) insist that they are not basically anti-police or anti-society, that they are not just kids from housing estates, but that they respect their environment. Parkour means more to them than pursuing a new urban sport or upsetting passers-by. And it does so to an increasing number of followers and audiences, large companies and the media.

Inhabiting Urban Cultures

Key urban theorists in the humanities and social sciences, including Edward Soja, Saskia Sassen and Mike Davis, have noted that the contemporary period of global restructuring has been accompanied by an accentuated consciousness of spatialization and regionalization. This process reinstalls the local as a new sphere of activities which can only be understood through its network of relationships with other localities.[5] The significance of geographical location is being transformed and rewritten by an unprecedented dialogue with global activities. Crucial questions addressed by this phenomenon are: What is the extent to which local individuals actually participate in this process? How can they take part in the development of new infrastructures devised by planners, politicians and municipalities? How can they relate to the environments, concepts and images produced for culturally specific groups to which they belong or to which they do not belong? How can they reclaim local spaces as networked sites of enactment and agency? And how do companies pressurized to capture consumers' imagination sit in relation to this desire for co-operative experience?

Many of the currently evolving urban practices generate affiliations to culture, which emphasize the performative nature of an engagement with the urban. Therefore, questions that address participation in urban culture and what it means to belong to a culture need to be solidified through the performative acts (i.e. through spatial practices, cultural affects, aesthetic situations, etc.) in which they are expressed (and not through static representations, objects, territories or built architectures). As performance theorist Gavin Butt argues, these affiliations can be understood as performative because they come into being only in and as the acts themselves. They are concerned with "the production of new forms of cultural affiliation which attend the scene of an engagement with art; ones which eschew the established and formalized structures of identity and belonging."[6]

Such engagements with the built environment move the focus from space as a container of pre-determined activities to emerging practices of temporal inhabitation. With advanced technologies and the onset of Internet culture in the early 1990s inhabitation is becoming less about doing what a designer or architect intended in a space and ever more about decentered, deregulated and almost aggressive appropriation. In the light of increasing virtualization and mobilization, the premises of inhabitation are changing ever faster. The complex ways in which virtual and physical arenas, as well as global and local scenarios are interwoven and how they mutually shape each other around public fantasies are central to the understanding of the emergence of novel practices of imaginative, ad-hoc appropriation of space for unanticipated purposes. We can contextualize them in the histories of non-plan, French Situationism and other cultural movements through which groups of people have sought to regain some control over the built environment.[7] Maps and experiences produced by parkour share much common ground with the Situationist tactics of *détournement* or *derive*, with Henri Lefèbvre's notion of spatialization[8] and with the moves and leaps of skateboarding on which parkour is modeled

On top of the LSE, London.

Sebastien Foucan performing a handstand, National Theatre London

At the Imax subway, London.

to some extent. They are situated through a continual re-living of the city.[9]

This leads us to a paradoxical image of the city as a scene of simultaneous refusal and embracement evoked by free running; one of the defining characteristics of free running is that it takes on a form of disruption. It is a disruption of urban realities, within which people find themselves trapped for a variety of reasons. A possible reason may be the experience of local and cultural exclusions, another one the experience of one's identity being subjugated to limiting definitions. Free running offers a way out of these identity deadlocks regarding both the environment and the people inhabiting it. At the same time, free running exhibits a deep sense of aesthetic engagement with this very same environment, an almost mythical encounter and closeness with its present materiality. It is a paradoxical movement of seizing and celebrating something, while giving it a new form of aesthetic presence. It is a rewriting which is in love with a form of cultural affiliation whose conditions it constantly undoes. This aesthetic presence becomes constituted not by designing new objects or other elements of a similar order or by adding new layers of substance, color or texture. It is brought into existence by way of touch. The fleeting physical contact of the free runners with the urban is the defining moment of its aesthetic production and transformation. Never fully inhabiting a place, never being fully contained by it and always on the move, this is the unsettled and unsettling position free running occupies.

The City is Your Playground

There is a secret adoration in architectural discourse pertaining to parkour's apparent effortlessness to rewrite spatial systems of signification. In an interview for a Channel 4 documentary on free running, British architect Will Alsop recently said, "I am sure there is all sorts of other people waiting in the wings to come in and corrupt our spaces in all sorts of different ways that we have not even thought of yet. We spend millions and millions of pounds to build all this stuff, and what else could that stuff be used for – that's the key question."[10] The potential of architecture seems to lie neither in planned use, nor in current use. It is concealed in the *something else* of which free running is a very powerful reminder. While this vague notion of a third use, which differs from both the original use and the present utilization, may not give us many clues as to the coming materiality of cities, it provides for a thinking which acknowledges the value of gestures to forge identifications and a sense for community. According to Giorgio Agamben's understanding, the gesture is a means without an end. Therefore, it opens up a space for participation in communal life without resorting to consolidated, deeply-rooted identities. The gesture refers to a way of inhabitation, which is less prone to the surrender of the functions and rules of cities or other shared environments. It indicates a means of corrupting the city while hugging it. The point of this aesthetic mode, as the Dutch philosopher René ten Bos argues, is "to completely change the world without violating it."[11] In other words, the paradox of free running consists in the fact that its refusal to exclude or oppose other identities – something which is echoed in frequent claims on parkour websites to foster friendly and welcoming communities – is based upon a refusal to accept form as a determining condition. Free running as an act of participatory inhabitation becomes possible not so much as a process of top-down authorization but through being enacted. In doing so, it creates participatory geographies open for anyone to intervene. Like the success of a gesture that creates its own possibility, it is the bodily articulation of free runners, the act of doing parkour, which evolves the core of its own political and aesthetic condition.

It's the unhinging of the links between our imagination of the urban (and the fantasies we live out through this imagination) and the architecture that sustains or promotes it, which is an important part of this articulation. While everyday conduct assigns particular roles and concepts to particular buildings and places, free running challenges this long-sustained order by exerting a particular form of intrusion upon these architectures. Unlike graffiti or similar aesthetic interventions in the built environment, it is not an intrusion which manifests itself through legible marks. It is more of an intrusion into a commonly agreed-upon notion of the urban and its physical and spiritual relation to the built environment. Free runners do not question the materiality of physical space and therefore they don't need to act out violence upon its substance. They question and unhinge our conception of built space as such: the creative processes through which the elements designed by architects, regulated by municipal boards and used by millions of people, come together as the *idea* of the city. In using the power of the body, that is to say in stretching the idea of what bodies are able to do with the things architects build, free running introduces a hitherto unknown

corporeality to the city. Although this new corporeality borrows from a set of fictional genres, it remains closely connected to a true engagement with the city, amplifying the human body as one of the most potent signifiers of the idea of inhabitation.

Yet, this balancing act between refusal and embracement is currently facing a new level of contestation. Core Design, the computer game company behind *Loro Croft* has developed a parkour game called *Free Running*, released worldwide on Play Station (PSP™) in fall 2005[12], which features virtual look-alikes of the most prominent traceurs. Press statements claim that "*Free Running* offers authentic, intense excitement which is true to the spirit and art of parkour".[13] An ad campaign for the game is intended to run on screens in 500 European outlets of retailer Footlocker, which has exclusive rights to sell a new Adidas PK-shoe.[14] The trailer will feature a mix of the real-life exponents of free running and their computer-animated alter egos from the game. But these are not the only incidents by far in which free running organizations and companies have teamed up to promote a new image of the city. Urban Freeflow are proud to announce that they have carried out high-profile projects with a number of the world's most innovative companies, including Nokia, Toyota, Siemens, O2 and Eidos. The bigger the better. It is nearly impossible therefore to think about free running without noticing its complicity with the value systems that underpin the lifestyle industries and representational economies of contemporary urban life. This complicity offers an easy way into arguing a certain corruption of interests: free runners have begun to use the city much as companies use advertising – as an occasion to offer services for money. But drawing up a critique of this kind is not my intention here, nor would this be a particularly helpful point to make about today's urban culture. While the easy absorption of free running into the economy market may be indicative of a series of interests shared between free running organizations and the leisure industry (most notably a common interest in recognition and power), we may misunderstand the urban as an essentialist or constructed enclosure sustained by ever-persistent narratives.

What parkour mobilizes is a powerful rearticulation of the urban as a contested field, both physically and virtually. That is to say, parkour facilitates a certain notion of the urban as a site of struggle. More particularly, it presents urban experience as a struggle between different narratives and players caught up in a game of mutual attraction and rejection. It thus supports an unframing of dichotomies of inclusion/exclusion, local/global and audience/performer by exposing the dynamic fabric of the city in which inside and outside are not places assigned to particular practices or particular groups of individuals. In *The Coming Community*, Agamben points out that the threshold is not to be conceived as another thing with respect to the limit. It is rather "the experience of the limit itself, the experience of being-*within* an *outside*."[15] Thus the space of free running is always already the space of the city, a space whose threshold is in constant negotiation. What free running, along many other unscripted attempts of overcoming obstacles in the urban realm, offers to contemporary theory, is a stimulus to recover a complexity of the urban in which alternative practices are situated as possibilities co-existing with the city and not as its abuse, counterpart or outside. The achievement of free running is thus less the excitement produced through representations of breathtaking moves performed by a couple of attractive young people in spectacular environments. In this regard, it merely adopts the pose of a critique of the built environment whose power can be quickly dismantled by the media market. The merit and effectiveness of free running lie, from my perspective, in the tremendous amount of belief in the realities it has invented (let alone the reality that there is something named parkour) and in all realities to follow. In this sense free running is particularly successful among many narratives about the urban which have been presented as the truth and mistaken for fact. Its ability to win extraordinarily large audiences of believers may be partly founded on media response, but it is equally based on the dialogues it is able to create with a genuinely raised awareness of how much of our reality is open source. Collectively shared narratives that once seemed to explain the world have turned into networks of stories we use to create our own way of inhabitation. *Defy rules, defy gravity, climb higher, jump further, run faster* – the commands hurtling towards us in the free running computer game are not commands directed at our corporeal presence. They instead speak to our imagination. To mistake the computer game for reality would be to mistake the map for the territory. Equally, the thrill of free running attends less to the actual space captured in glossy photographs or sophisticated animations than to the space these images open up for something else.

endnotes

1 Jeremy, 2005. *Art in Motion*. Available from World Wide Web: http://www.freerunning.net/ [online], accessed 04 June 2005. Urban Freeflow was founded in February 2003 and is one of the world's largest and fastest-growing free running communities. With over 20m hits a year, United Kingdom Parkour Association (http://www.parkour.org.uk), founded in November 2003, is the UK's national non-profit parkour organization and bills itself the #1 website for parkour worldwide

2 George Hébert, *L'Education physique virile et morale par la méthode naturelle* (Paris: Vuibert, 1936).

3 The word parkour derives from "parcours du combatant," the phrase referring to the obstacle courses of Hébert's method

4 *Yamakasi*, 2001, directed by Ariel Zeitoun and written by Luc Besson

5 See Edward W. Soja, *Postmetropolis: Critical Studies on Cities and Regions* (Cambridge, Massachusetts: Blackwell, 2000); Saskia Sassen, *Globalization and Its Discontents* (New York: The New Press, 1998); Mike Davis, *Planet of Slums* (New York, London: Verso, 2005).

6 Gavin Butt, "Introduction: The Paradoxes of Criticism," in G. Butt (ed.) *After Criticism: New Responses to Art and Performance* (Oxford: Blackwell, 2005), 14

7 Jonathan Hughes and Simon Sadler (eds.), *Non-plan: Essays on Freedom, Participation and Change in Modern Architecture and Urbanism* (Oxford Architectural Press, 2000).

8 Henri Lefebvre, *The Production of Space* (Oxford: Blackwell, 1991).

9 Iain Borden, "Stadt sprechen," in Peter Mortenbock and Helge Mooshammer (eds.) *Visuelle Kultur: Korper - Raume - Medien* (Wien, Koln, Weimar: Bohlau, 2003), 93.

10 Will Alsop in *Jump London*, a British documentary commissioned by Simon Andreae for Channel 4, produced by Mike Smith and directed by Mike Christie for Optomen Television (2003). *Jump London* was first broadcast in September 2003 and released on DVD in July 2004

11 René ten Bos, "On the Possibility of Formless Life: Agamben's Politics of the Gesture," *ephemera* 5, no. 1 (2005): 37.

12 http://www.freerunninggame.com [online], accessed 04 June 2005.

13 http://www.pro-g.co.uk/news/nid/792/749/ [online], accessed 04 June 2005.

14 http://www.flyfree-forever.com [online], accessed 04 June 2005.

15 Giorgio Agamben, *The Coming Community* (Minneapolis/MN: University of Minnesota Press, 1993), 68.

bibliography

Agamben, Giorgio. *The Coming Community*. (Minneapolis, MN: University of Minnesota Press, 1993).

Borden, Iain. "Stadt sprechen." In Mörtenbock, Peter & Helge Mooshammer (eds.). *Visuelle Kultur: Korper - Raume - Medien*. (Wien, Koln and Weimar: Bohlau, 2003), 79-99. (Original manuscript in English.) A different version of this essay has appeared in Hutchinson, Ray (ed.). *Constructions of Urban Space*. (SJAI Press, 2000), and in Notaro, Anna (ed.), *Visuality, Space and the City: Classic and Modern Essays*. (Rodopi, 2002). It is extracted from Borden, Iain. *Skateboarding, Space and the City: Architecture and the Body*. (Oxford and New York: Berg, 2001).

Bos, Rene. "On the Possibility of Formless Life: Agamben's Politics of the Gesture," *ephemera* 5, no. 1 (2005): 26-44

Butt, Gavin. "Introduction: The Paradoxes of Criticism". In Gavin Butt (ed.). *After Criticism. New Responses to Art and Performance*. (Oxford: Blackwell, 2005), 1-19.

Davis, Mike. *Planet of Slums*. (New York and London: Verso, 2005).

Hébert, George. *L'Education physique virile et morale par la méthode naturelle*. (Paris: Vuibert, 1936).

Hughes, Jonathan and Simon Sadler (eds.). *Non-plan. Essays on Freedom, Participation and Change in Modern Architecture and Urbanism*. (Oxford: Architectural Press, 2000).

Lefebvre, Henri. *The Production of Space*. (Oxford: Blackwell, 1991).

Sassen, Saskia. *Globalization and Its Discontents*. (New York: The New Press, 1998).

Soja, Edward W. *Postmetropolis: Critical Studies on Cities and Regions*. (Cambridge, MA: Blackwell, 2000).

Urban Freeflow website. http://www.freerunning.net/.

Store front in Nottingham.

Donald Judd, Untitled, 1989.

Edward Levine

Gravity and Anti-Gravity in the Critical Cosmos

After the Second World War aesthetic practice and theory focused on the art object as a world in and to itself. The art object was self-referential rather than signifying a world outside the object. The literary criticism of Brooks and Warren and the visual criticism of critics such as Clement Greenberg exemplify this monadic view. These critics have conceived the work of art as an existential entity whose meaning is generated from the formal relationships between the elements of the medium. For example in the case of poetry we look at how the devices of the poet such as simile and metaphor, symbol, and rhythm of the prosody interact to create the motion and emotion of the poem. The critic looks at the poem as an independent system built out of the literary tropes interacting to generate our experience. The critic adduces arguments based on what is happening within this system. The critic does not look at the cultural context or biography of the poet to convince us of the validity of the interpretation. In architecture what a building conveys (means) is the result of interaction between the elements that constitute the building. Its meaning lies in the experience of the interaction of the architectural elements. The placement of the door, windows, stairways, and interior spaces. The relationship between the exterior forms and the interior volumes. How light penetrates the interior volumes and affects the masses inside a cathedral. Or how the roof and walls intersect and define each other.

For someone such as Clement Greenberg the world of painting had evolved toward a reductive state. He conceived modern painting as painting stripped of external elements; the artist should use its inherent formal elements only to construct the painting. Modern painting is non-representational because the conception of representation is something he conceives to be external to the world of painting. Its reality is self-reflexive. Painting does not derive its being from its relations to any external world. Whatever meaning (a debatable term for modernists) one derives from the painting is the result of the elements of the painting itself. It is not surprising that an art that was non-representational in the traditional sense sought, as one of its purposes, to defeat any metaphorical reading of the work, as this would point the viewer to something outside its hermetic world. The literary was seen as something to be avoided. The work of artists such as Stella, Judd, Irwin, Flavin, and Morris exemplified this approach. Their art built upon the work of the Abstract Expressionism and the earlier non-representational artists such as Mondrian, Brancusi, and Malevich. The work of art exists as a formal and expressive world. An island existing in a larger context but somehow cut off and independent from that surrounding environment. The world of the work like our physical world has its logics, forces and character that derive from the interrelationships between the forces that construct and generate its life. The critic's job was to locate these forces and determine how they interact to create the experience and meaning of the work of art.

Although flawed and, in some ways, myopic, this conception inspired some important observations about the nature of works of art as well as its interpretations. It required a careful and sometimes arduous and meditative interaction with the physicality of the work. Theories of perception and experience fed critical theory and practice. Hence the importance of *Gestalt* psychology and writers such as Merleau-Ponty and Husserl for both artists and critics. Structuralism also powerfully shaped aesthetic theory and critical practice. This philosophical approach derived from linguistic studies

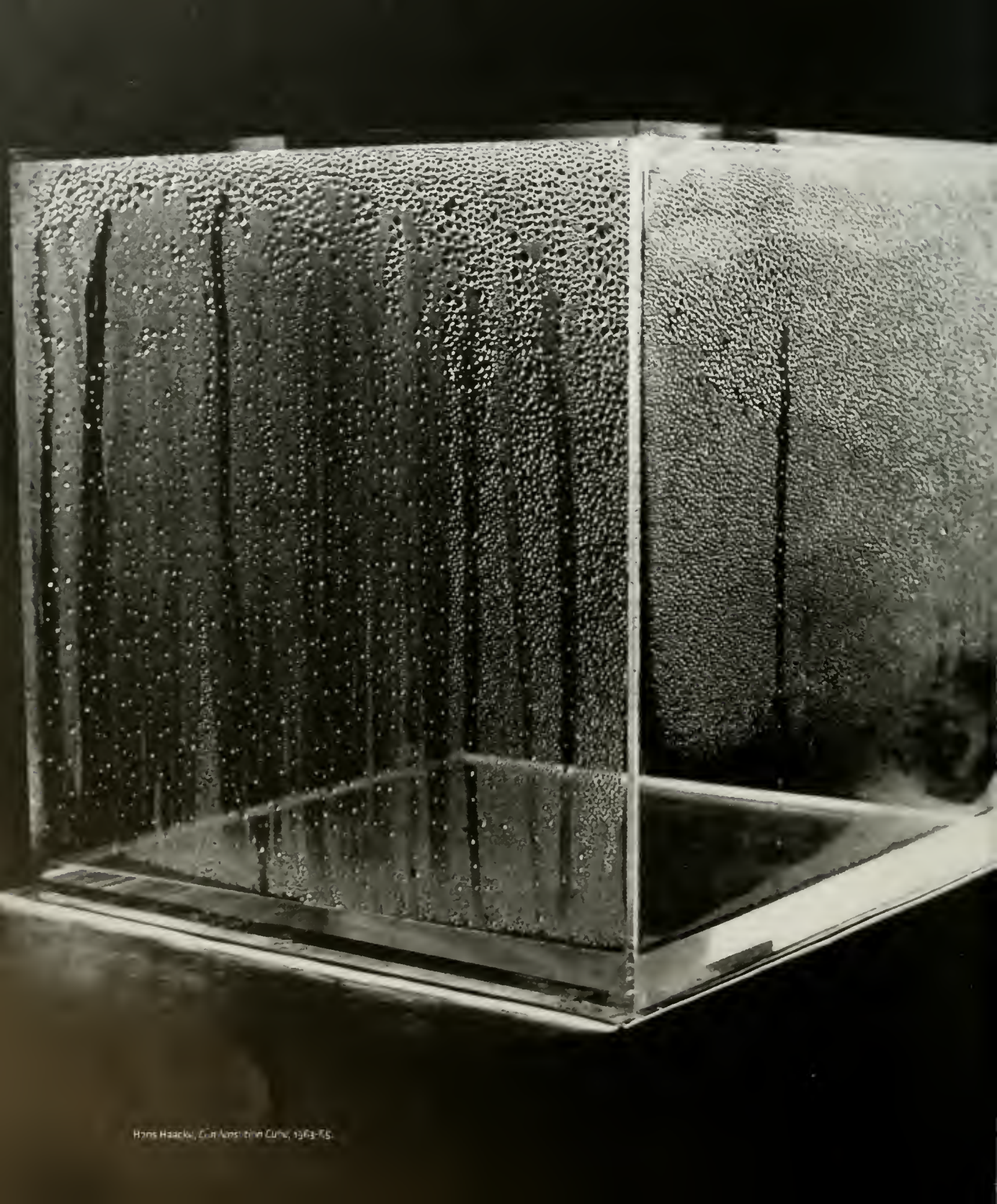
was also a historical and a cultural one. It looked for universal forces that lie within a system to explain the generation and import of a work of art.

Younger critics and artists began to question the assumptions underlying this microcosmic view that separated the work of art from the macrocosm of history and especially culture. What and how we are and how we think arise from the systems in which we find ourselves. Our language system, our social and political systems determine our concepts of knowledge and truth that do not exist outside these contexts. The governing principle of this approach is that all work is situated, embedded in a social and cultural context that affects it and largely generates the work of art. Such a view of the art and critical practice paralleled younger artists turning toward this context (macrocosm) as a source of iconography and iconology of their work. Philosophers such as Derrida, Habermas, Jameson, Foucault, and Marx influenced artists and critics. Social issues and the fabric of the art world itself became the direct source of artists' inquiry. Hans Haacke, Louise Lawler, Michael Asher and many others exemplified this line of inquiry that sought to bring to the forefront the context itself as the subject matter of the work. Artists turned their attention to the political and economic aspects of the art world itself. Hans Haacke's proposed exhibition at the Guggenheim Museum that attempted to expose the economic background of the benefactors to the museum and art world was cancelled by the Museum because the social impact was too personal for the museum.

Feminism and feminist writing became very important in the intellectual and productive life of this period as well as providing another perspective on the interaction between the macro- and microcosm. Questions about gender and identity were opened for investigation that reflected the paradoxes and contradictions between micro and macro. The age-old dialectic between nature and culture (a variant of macro and micro) surfaced as an important arena of debate and contention. How much is gender shaped by nature and culture? Where are the points of intersection and confrontations between these forces? The works of artists such as Barbara Kruger, Cindy Sherman and many others manifested an investigation of the issues surrounding the dialectic.

These shaping forces of the macrocosm largely obscured an interest in the physicality of the work. It divorced the mind (thought) from body (the work itself). It made macrocosm the determinate force in production. It almost seemed that work grows *sui generis* out of context and exists separated from the existential structure on which the ideas of a work depend. A mind that is independent of the body. In effect the periphery of the work became the center and the center was moved to the fringe. The elucidation of context was largely at the expense of the direct and immediate experience of the work. The brilliance of the analysis often left the work as an aside, somehow appearing less rather than more than the analysis, a brain without a body.

What was missing is the more ecological notion of how works of art and their environment shape and construct each other. Art in some sense makes culture a living system. Culture is the petri dish out of which art germinates and grows. We need a more Einsteinian paradigm; Einstein saw gravity as warped space and space as warped by the objects in it. Similarly, it is important to see how art can structure our culture as much as how culture (macrocosm) structures the art object. It is not a mystical astrology we are looking for but a way of understanding the reciprocity between macro and micro. How the environment is altered by what takes part in it as well as what exists and how it exists is modified and changed by its context. The physicality of the work, its essential ambiguity cannot simply reflect the world in which it resides any more than a human being is simply a product of its genes. A work of art is transcendent and paradoxical. That means that it partakes of and takes flight from the gravitational forces of its micro and macrocosm. It shapes its cultural space as well as taking shape from it. All works of art are revelations of the interactions between the forces of a distant and immanent cosmos. Through the creation of the work the artist embodies this incarnation. In the process of creation the artist forges a new compound between the conceptual and the physical, between the personal and the macrocosmic forces that surround the artist. For artists the stars always affect the creation of a work. On the other hand when Galileo looked at the stars through his telescope the stars were never the same.



Hans Haacke, *Condensation Cube*, 1963–65.

Mark Jarzombek

Haacke's Condensation Cube:

The Machine in the Box and the Travails of Architecture

Art works are hermetically sealed off and blind, yet able in their isolation to represent the outside world. (Theodor Adorno)[1]

Hans Haacke's *Condensation Cube* (1963-65) is a hermetically sealed, clear acrylic plexiglass box, thirty centimeters on the side, that holds about one centimeter or so of water.[2] Condensation collects against the inner surface of the plexiglass forming vertical streaks on the inside. How the condensation is created can be explained in the following way: air can hold only a limited amount of water vapor and when that limit or dew point – a law of nature, which applies to all bodies of air all over the world – is reached, condensation occurs. In almost all art museums, the temperature is set at a cool 65 degrees Fahrenheit, which means that at a relative humidity of about 45 percent (the standard in most museums), the dew point is at 42 degrees. Because plexiglass is a bad thermal insulator, the air temperature inside the *Cube* is the same as the temperature on the outside, namely 65 degrees. But since the humidity is close to 100 percent, the dew point is much higher, and is, in fact, about 65 degrees, precisely the temperature of the plexiglass.

I will argue that the *Cube* sets in play a rather complex game of illusions between the museum and the architecture that defines its space. This revolves not only around the word "cube," but also around the status of condensation as a cultural construct.

The story begins in the mid-nineteenth century when, with the advent of mechanized, ducted heating systems in multi-floor apartment buildings, it was discovered that condensation appeared neither on the outside nor on the inside surfaces of the building, but within the wall itself. There it would lurk, creating mold and rot. Condensation endangered the life span of these new buildings and thus, of course, the capital investment that they represented. Though the problem was first noticed and studied by the French who were building thousands of apartments in Hausmann's Paris, it was in the northern climate of Berlin where condensation proved to be particularly vexing. It was thus natural that among the first scientists to address the problem was Adolf Wilhelm Keim (1851-1913), whose family name, by the way, means 'germ.'[3] He argued that though dampness is brought into architecture because of the capillary nature of stone and brick, that in itself is not the problem. Stones and bricks had survived relatively well even in damp climates. What happens is that the dry heat on the inside sucks the moisture deeper into the building where it no longer dries out in the summer. In the lingering encounter with lime and cement, moisture creates corrosive chemical discharges that lead to what Keim called *Mouerfross*, literally a "wall-eating" disease that was, in Keim's mind's eye, similar to cancer eating at the tissue of a living body.

To protect against *Mouerfross*, Keim argued that the wall needed to be ventilated from within; in other words a flow of air, the positive, would offset the flow of water, the negative. The wall, therefore, needed to be separated into two component layers, a structural wall and a type of skin or internal surface, composed of thin brick tiles separated from the structural wall by about an inch, in which space air could flow. To keep moisture in that air corridor from entering through the bricks, Keim added that it was "beneficial to give the inner surface of the tiles a coat of asphalt."[4] This would leave the surface facing the room permanently dry so

that it could be coated with plaster, which can then be painted or papered. Wall paper, which had become common in bourgeois houses, and which had also become quite costly, was now safe from the damp. Needless to say, Keim's solution has been used in architecture ever since, except that by the early twentieth century, tar paper was preferred and by the mid twentieth century special types of plastic sheathing like Tyvek, known to every home-builder in the United States, became the norm. Floors, however, posed somewhat of a problem since closely spaced floor joists meant that internal air circulation was limited.

In Keim's world, architecture, in facing the crisis of industrialization, needed to be rethought from the inside out without having to give up its unity. His metaphor was thus appropriately biological. Structure had to be separated from skin by a type of two-dimensional lung. The structure could then do the heavy lifting, the interior wall could work as backdrop for the decorative embellishments in the room, and the lungs of the newly devised body could guarantee the whole a long and healthy life. And yet, if there was a moment where we see the first true separation of interior design from architecture, and architecture from environmental engineering, it was when architecture had to guarantee a way to keep the interior surfaces dry.

The history of condensation took another step, and one that brings us even closer to meaning of the *Cube*, when we move from the heating to the cooling of air. If heating dried the air out, air conditioning returned moisture back into the architectural ecosystem. However, since air conditioning, with Willis Carrier's patent given out in 1906, was mainly used to cool machinery in milling and paper factories, condensation was an industrial not a civilian problem. The trend largely maintained itself through WWII when the military created sophisticated insulated and de-humidified environments for the transportation of munitions. The first de-humidifier was built for the United States military in 1947. They were more complex than humidifiers since if not maintained properly, mold and bacteria could grow inside them, thus requiring the introduction of an array of chemicals to keep them clean. After WWII, both humidifiers and de-humidifiers became significantly cheaper, which meant that mechanized air now became more properly "architectural." Soon one could find air conditioners in any American home. Condensation was now encountered by the home builders on a scale never before seen. Already in 1949 the Housing and Home Finance Agency published *Condensation Control*, a pivotal document in understanding the science of building moisture.

One has to remember that the shift from a biological metaphor of architectural illness (*Mouerfross* as cancer that could be cured by a delamination of the skin from the architectural body) to a mechanical metaphor of respirated atmosphere parallels the design of hermetically-sealed space capsules by NASA. Architects in the mid 1960s were, of course, enamored of the promises of environmental management and soon began to design hermetically-sealed buildings. Museums were a major advocate of applied atmospheric control, with numerous studies being undertaken to show that artifacts practically of all types were vulnerable if not protected from heat and humidity. Museum chatter on the topic reached a pitch by the late 1950s, with the International Council of Museums (ICOM) dedicating its entire 1960 issue of *Museum* to the question of atmospheric standards and norms.[6] Machines specifically designed for museums were now available, machines that combined both humidification and dehumidification, the fundamental premise being in most museums to keep the temperature as low as possible and the humidity as constant as possible.[7] This soon became the rule governing the preservation of most art works. As one expert noted, "fluctuations in temperature and humidity caused by external factors, i.e. heating, sudden weather changes, an in-flux of visitors, etc., are a major problem for museums." This means that:

> *Museums need to control the environment around exhibits 24 hours a day, seven days a week as temperature and relative humidity can fluctuate frequently and dramatically on a daily basis. This requires constant operation of the humidification system, which therefore needs to be reliable.*[8]

The *Condensation Cube*, first made in 1963, was produced at the very time when museum curating and moisture engineering were becoming synonymous. The piece sets the natural cycles of water and condensation in relation to the invisible and tightly sealed plastic sheathing hidden from view in the museum's walls. The *Cube* is, however, more than an ironic counterstatement to the museological environment, for one has to remember, that it is not just the mechanization of atmosphere that is important in museums, but the need to preserve temperature and humidity at a constant level. In other words, it is the museum's constantly monitored machines – a humidifier and a de-humidifier working *together* with a thermohygrometer (also known as hygrothermograph) – that produce the constant rain of droplets in Haacke's *Cube*. The condensation in the *Cube* is thus a type of *perpetuum mobile* induced into motion by remote control. One

artifice is posited against another, a Box against a Cube, a man-made constant against a natural law – the white noise of the machines against the quiet of the water.

The *Cube* also creates a feed-back loop with the machines that set its condensation in motion, for if the machines were to malfunction, condensation would not appear. The *Condensation Cube* would become just a cube and no longer a "work of art." Stated differently, by observing the *Condensation Cube* one is registering the efficiency of the machines, with the *Cube* a type of monitor in its own right. The irony is that, as the quote above indicates, visitors to the museum endanger that relationship. Humans bring heat and humidity into the room, which is why the more precious the objects, the greater the restrictions on how many people are allowed into the museum space. A museum visitor is a potential danger to the law of environmental constancy. If too many people were to stand close to the *Cube*, the micro-climate around it would change the *Condensation Cube* into a mere plexiglass box, setting off environmental as well as curatorial alarms.

The problem becomes even more complex when one takes into consideration that the environmental constant that is created to preserve art works actually endangers the building. As one researcher noted, "water vapor, thermal diffusion and interstitial condensation have become a serious problem for many museums."[9] Normally one wants condensation to form on the outside of the building, or in the specially designed air cavities, as Keim had hoped, but what happens is that in summer, internal air is cooler than outside air and that, therefore, the vapor barrier is on the wrong side of the inner air corridor; instead of blocking moisture from coming in, it blocks moisture from going out. And in winter, when there is less moisture outside than inside and when the humid indoor air meets building elements that are cooled by contact with the outdoor climate, water condenses on the *inner* surfaces, leading, as it has been observed, "to rotting of wooden elements, mold growth on interior finishes, corrosion of metal elements, and spalling of masonry – damage which can quite rapidly reduce building elements to the point where renovation must be performed."[10] In other words, the attempt to control condensation creates situations where condensation is even more of a problem. The result is a conundrum.[11] The building's respirators keep the art alive, but spell architecture's doom. In other words, the architectural body has to be sacrificed in the name of art. The *Cube*, its transparent walls mimicking the vapor barrier in the museum's walls, lets us see the processes that are corroding the building from inside out.[12]

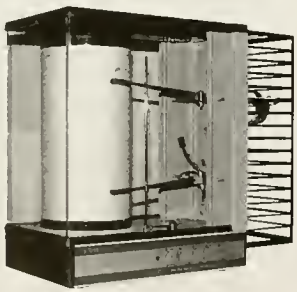
The modernist museum, one must remember, was based on the promise of the freedom that artists supposedly had within its space, thus its purported retreat from representation – the empty loft preferred over the colonnaded hallways of old. But in becoming more and more a refrigerated Box, it also became a machine-to-exhibit-in that, in turn, became increasingly regulatory *and* simultaneously architecturally self-defeating. It is the representation of that paradox that is at stake with *The Cube*. Architecture in the nineteenth century, in the service of modern comfort, had to split its surface, but once split it could not be put together again. The *Condensation Cube* – a condensation-producing machine in its own right – is thus the mirror into architecture's philosophical impossibility, for if, as Adorno argues, an art work is such only because it is "hermetically sealed off and blind" and yet able "to represent the outside world," then that is what architecture is in no position to accomplish, since in being "sealed" it encounters its status as something that is undone, unlike Haacke's *Cube*.

The difference between the Box and the *Cube* is the difference between modernism and postmodernism. The modernist attitude to condensation started from the premise that diseases could be dealt with by effective treatments. This was the approach of Keim, and is still the approach of the curatorialized museum. The postmodernist position accepts the failure of science – and even the complicity of science in that failure – while struggling to make sense of a more complex bio-cultural world. Architecture, however, had no real choice in the matter, yet for better or worse, it has become a bio-cultural structure where pieces start to get replaced, perhaps a hand rail here; a light fixture there, and then eventually a wall needs to be rebuilt, and then finally, it is cheaper to tear it down altogether, where its pieces wind up in a dump to mold, rot and rust at a more natural pace.

There is a redeeming element in this, in that even though machines in their effectiveness first compensated for and then actually created an ineffectual architecture (or rather an ineffectuality that we continue to call "architecture"), the museum building, unlike an art work, discovers in the process a mortality that is no longer possible for museological art. If an art work, even one that displays nothing more than condensation, is defined as that which *must* last, as that which *must* be protected from both human contact and the naturalness of climatic fluctuations, architecture is that which can never achieve such cultural status. Condensation brings to architecture a quality that is forbidden to art, namely a slow and, one could say, almost natural death. *Mauerfross* is nature enforcing its presence over the artificial. The

Condensation Cube, despite all that it reveals in the context of the modern museum is, by way of comparison, trapped in the very mechanisms of vigilance that it wishes to expose.

On the surface, one could ascribe to the art work the magnificence of its cultural message, and to architecture its sad and muted collapse into dampness, *Mouerfross*, temporality and irrelevance. Architecture is seen, without remorse, as an infirm and ultimately discardable body. But the more one sets out such a separation, the more it collapses. The *Condensation Cube* works because it explicates nature's departure from itself as something that is simultaneously absolutely natural and absolutely artificial. It respects and violates nature's legality, scanning a passage from nature to society and back again.



endnotes

1 Theodor Adorno, *Aesthetic Theory*, trans. Gretel Adorno and Rolf Tiedemann (London: Routledge, 1986), 257.

2 There is, however, a small hole at the bottom covered with clear tape, that allows the water to be drained when not on display

3 Adolf Keim, *Die Feuchtigkeit der Wohngebaude, der Mauerfroß und Holzschwamm nach Ursache, Wesen und Wirkung betrachtet und die Mittel zur Verhutung, sowie zur sicheren und nachhaltigen Beseitigung dieser Ubel* (Vienna: Hartleben, 1881, second revised edition Vienna Hartleben, 1901). The book was translated into English in 1902 as *The Prevention of Dampness in Buildings; with Remarks on the Causes, Nature, and Effects of Saline Efflorescences and Dry-rot, For Architects, Builders, Overseers, Plasterers, Painters, and House-owners* (London: Scott, Greenwood & co., 1902). Keim produced a new generation of paint that could last in the northern climes. His company, the Adolf-Wilhelm-Keim-Gesellschaft, still exists today Other works that deal with the problem of condensation are: Vaudoyer, *Belehrungen ueber die Mittel, die Feuchtigkeit in den Gebaeuden zu verhindern und zu vertilgen* (1845); Eduard Mueller, *Wie beseitigt und verhutet man Feuchtigkeit und Schwamm in Wohnhousern? Fur Bauhandwerker* (Berlin: Mayer & Muller, 1900); Oskar Arendt, *Die Feuchtigkeit in massiven Mauern, ihre Entstehung. Verhutung u. Beseitigung* (Berlin Petersilge & Korwitz, 1906), and Julius Wolfmann, *Feuchtigkeit und Schwammentwickelung in Wohngebauden* (Berlin: Siemenroth, 1910).

4 Adolf Wilhelm Keim, *The Prevention of Dampness in Buildings*, 24.

5 *Condensation Control in Modern Buildings, Housing and Home Finance Agency* (HHFA), Washington, DC (August, 1949).

6 Garry Thomson, *The Museum Environment* (London: Butterworths, 1978). By the 1980s, the emergence of Sick Building Syndrome (first recognized in 1982) and various types of "killer mold," drove architects back to more flexible positions, but art museums for the large part have not relented.

7 The vast literature on this need not be cited Suffice it to note that researchers have determined, for example, that humidity above 60% RH, causes wooden parts to expand and push against one another while simultaneously softening many traditional glues used to hold joinery and veneers together. When relative humidity reaches 70% in conjunction with temperatures above 60°F, mold and mildew may form and grow on wooden surfaces. See: http://www.rap-arcc.org/leaflets/wmfurn.htm [online], accessed June 2005.

8 http.//www.jshumidifiers.com/art htm [online], accessed 04 June 2005.

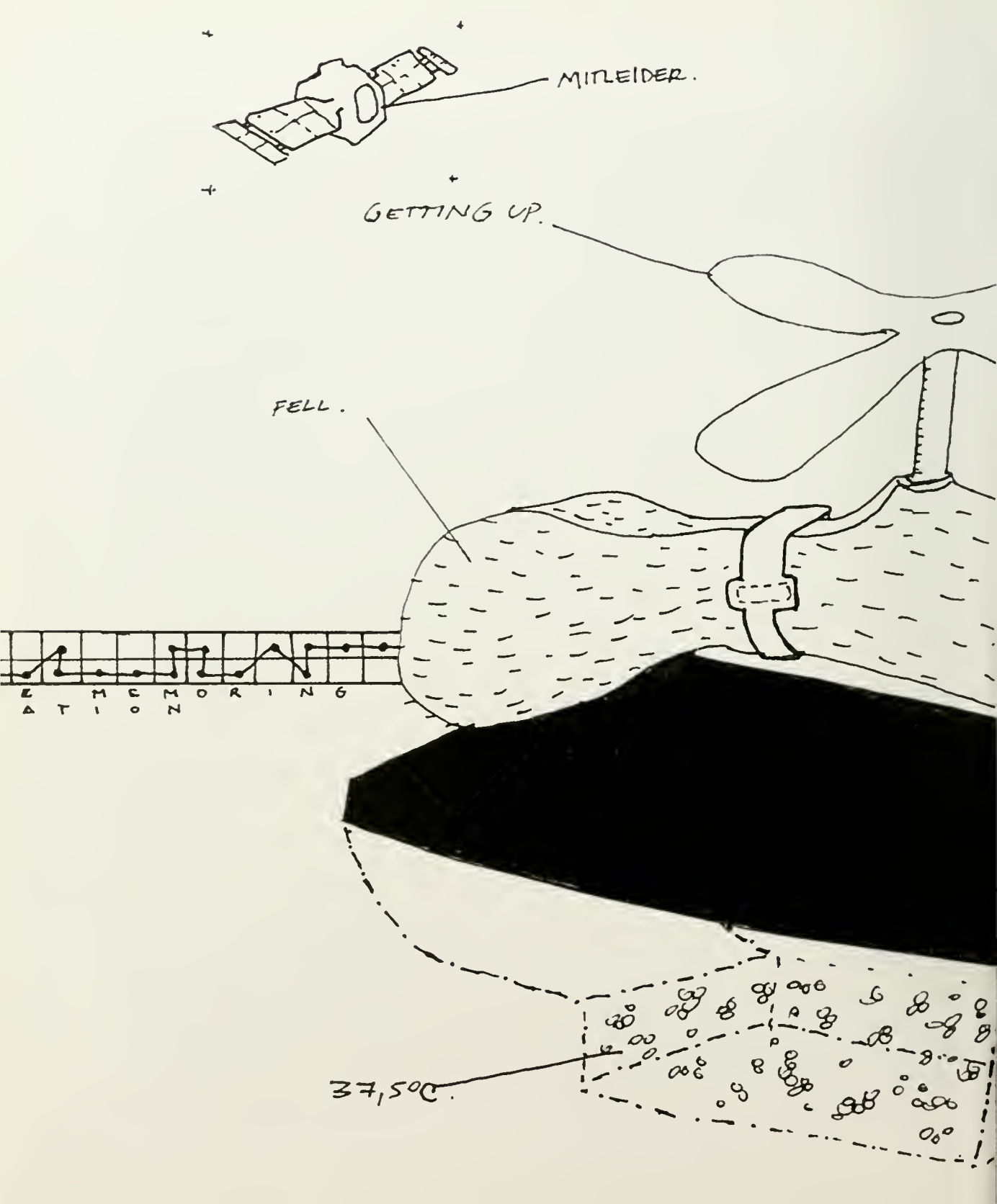
9 See discussion in *Energy Conservation and Thermal Insulation*, ed. R. Derricott and S.S. Chissick (John Wiley& Sons, 1981), 463-509.

10 http://palimpsest.stanford.edu/byauth/brownjp/humidity1997.html [online], accessed 04 June 2005. This is an excerpt from an article which was published as: JP Brown & William B Rose, "Humidity and moisture in Historic Buildings: The Origins of Building and Object Conservation," *Association for Preservation Technology Bulletin*, 27/3 (1996), 12-24.

11 One solution used by the Sackler Museum at Harvard was to pressurize the inside spaces so that moisture is driven outward. See: Michael Williams, "Fresh-air Climate Conditioning at the Arthur M. Sackler Museum," *The International Journal of Museum Management and Curatorship*, 5/4 (December 1986), 335.

12 The problem was addressed at the 1991 joint meeting of the Association for Preservation Technology and the American Institute for Conservation. One of the principles they adopted was that the museum "should recognize the need to preserve the unique character of both the historic structure and artifacts." See: http://palimpsest.stanford edu/bytopic/ethics/neworlea.html, [online], accessed 04 June 2005.

Haacke's *Condensation Cube*. Installation shot *Dependent Objects*, Busch-Reisinger Museum, Harvard.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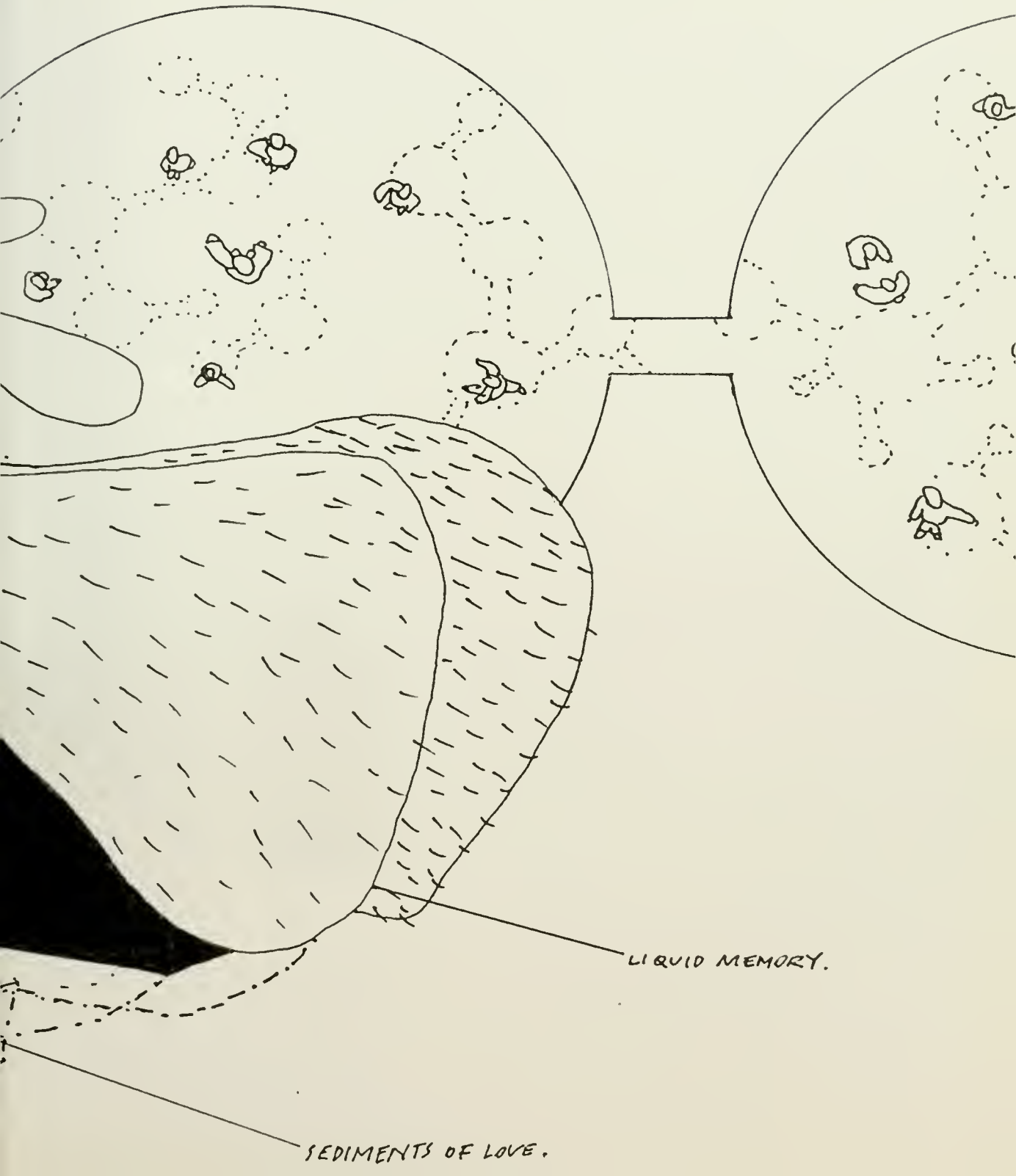
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thresholds 31
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